# Ez3D-i
# User Manual

## General Information

This manual provides detailed information on how to use Ez3D-i. This document may not be reproduced in any manner without the prior written consent from the publisher.
It is recommended that users read this user manual thoroughly before using the program in order to learn the installation of Ez3D-i S/W and the functions of the operating system.

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| **Website:** | **http://www.vatech.co.kr** |


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# 1. Introduction to Ez3D-i

## 1-1.What is Ez3D-i?

Ez3D-i is 3D dental imaging software which enables the user fast and accurate diagnosis. Its capabilities include the 3D visual simulation, 2D image analysis and different manipulation of CT images through a variety of MPR functions.

Ez3D-i containsall essential functionsof Ez3D Plusand provides a more intuitive user interface.

## 1-2. The main functions of Ez3D-i

Ez3D-i makes 3D image analysis easy for a user.
The following are the main features of Ez3D-i.

1. High resolution 3D VR
2. Smart Click for manipulating 3D images freely
3. Intuitive user interaction(UI)
4. Simple and easy manipulation of 2D/ 3D image
5. Easy axial movement of 3D images
6. Faster image analysis
7. Cross-Sectional View
8. Implant simulation using Bone Density Profile and Canal Tracing
9. Accurate treatment planning
10. Consult and Report function optimized for patient consulting

# 2. PC System RequirementforEz3D-i

**Minimum system requirements**

The minimum systemspecificationsrequired to run Ez3D-i is as follows:

Screen resolution 1280x1024
CPU Core 2 duo 2.4 MHz
RAM 2 GB
HDD 200GB
NVIDIA or ATI graphic card
(Memory Bandwidth 80GB/s or above, CUDA Core or processor 200 and above)
Operating system: Windows 7, Vista, XP

**Recommended Notebook System Specifications**

The notebook system recommendednecessary for running Ez3D-i is as follows:

Screen resolution 1280x1024, 15.4 inch screen
CPU Intel i5 2.6 GHz or above
RAM 4GB or above
HDD 512GB (7,500 RPM or above)
Graphic card NVIDIA GTX 675M, 2GB memory or more
Operating system: Windows 7, Vista, XP

**Recommended Desktop System Specifications**

The desktop system specifications necessary for running Ez3D-i is as follows:

Screen resolution 1280x1024, 19 inch screen
CPU Intel i5 2.6GHz or above
RAM 4GB or above
HDD 512GB (7,500 RPM SATA or above)
Graphic card NVIDIA GTX 660M, 2GB memory or more
Operating system: Windows 7, Vista, XP

**Warning**

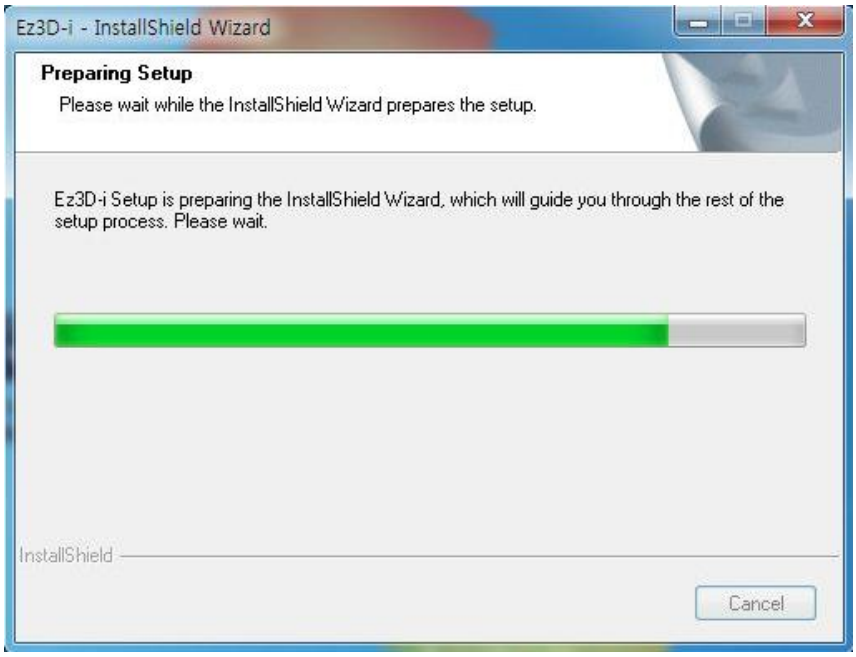
The updated version of graphic card should be installed on user’s PC.

# 3. Installation and Removal of Ez3D-i

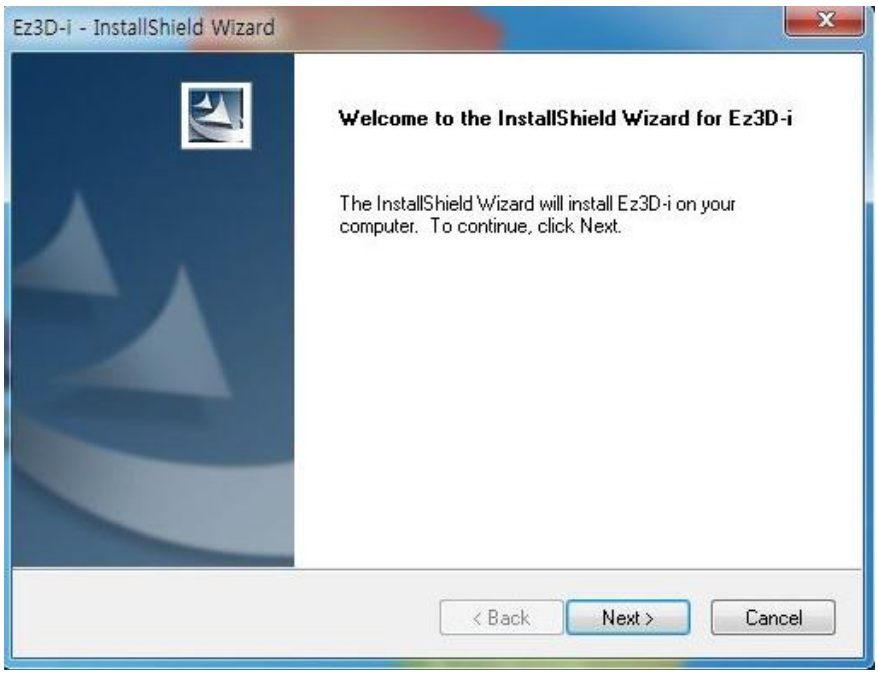
## 3-1. Ez3D-i Installation

1. Check the type of the PC system and double click the installation file.
   (Tip. Refer to 'Check the type of PC system and select the installation file'.)

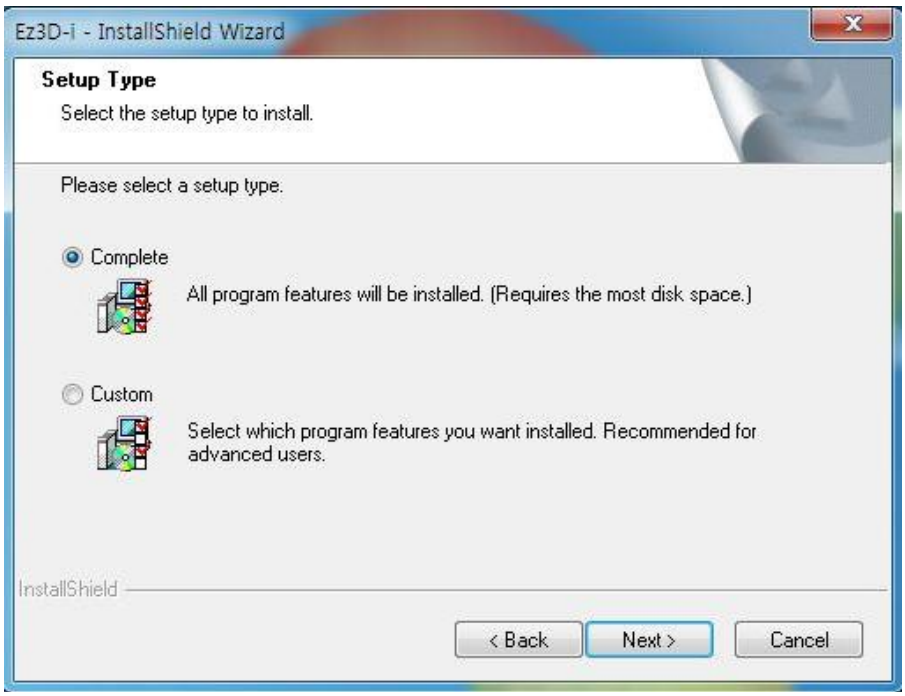
2. The InstallShield Wizard window appears and the program installation proceeds as shown below.


Ez3D-i - InstallShield Wizard
Preparing Setup
Please wait while the InstallShield Wizard prepares the setup.
Ez3D-i Setup is preparing the InstallShield Wizard, which will guide you through the rest of the setup process. Please wait.
InstallShield
Cancel

3. To proceed with the program installation, click the [Next]button when the following window appears.

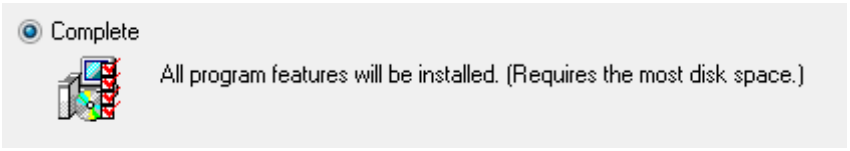

Ez3D-i - InstallShield Wizard
Welcome to the InstallShield Wizard for Ez3D-i
The InstallShield Wizard will install Ez3D-i on your computer. To continue, click Next.
< Back
Next >
Cancel

4. Select [Complete] in the Setup Type, then click the [Next] button to proceed with the installation.

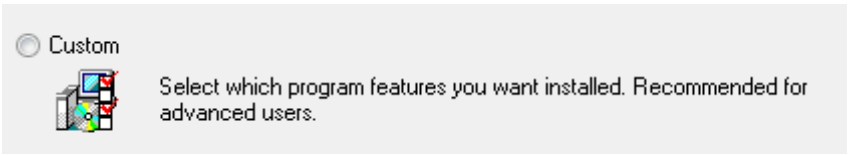

Ez3D-i - InstallShield Wizard
Setup Type
Select the setup type to install.
Please select a setup type.
Complete
All program features will be installed. (Requires the most disk space.)
Custom
Select which program features you want installed. Recommended for advanced users.
InstallShield
< Back
Next >
Cancel

**Information**

Setup Type

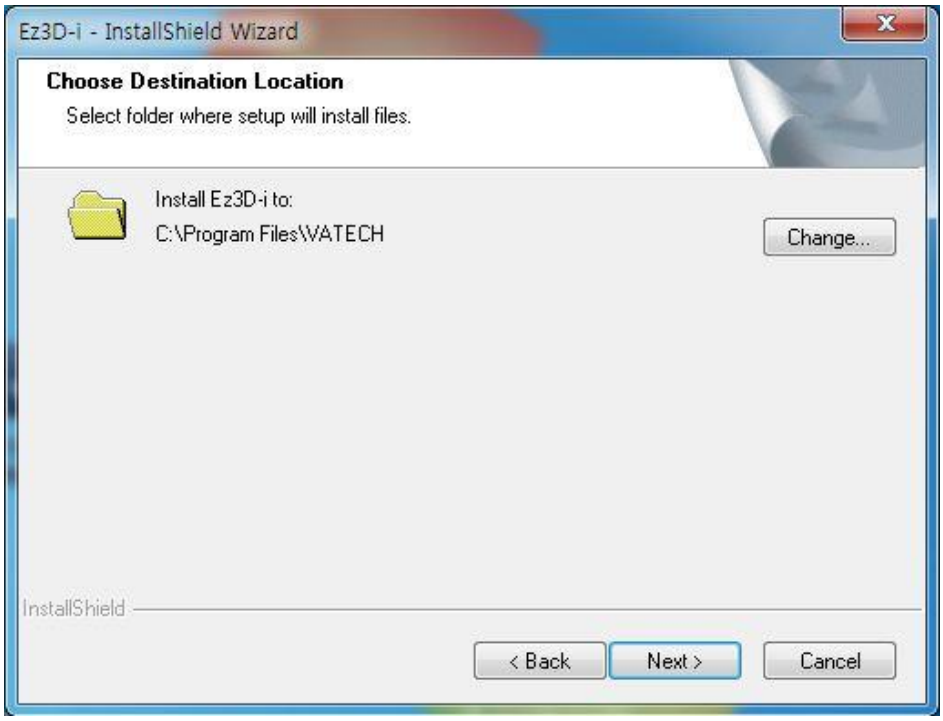



[Complete] installs all program features during the initial installation.

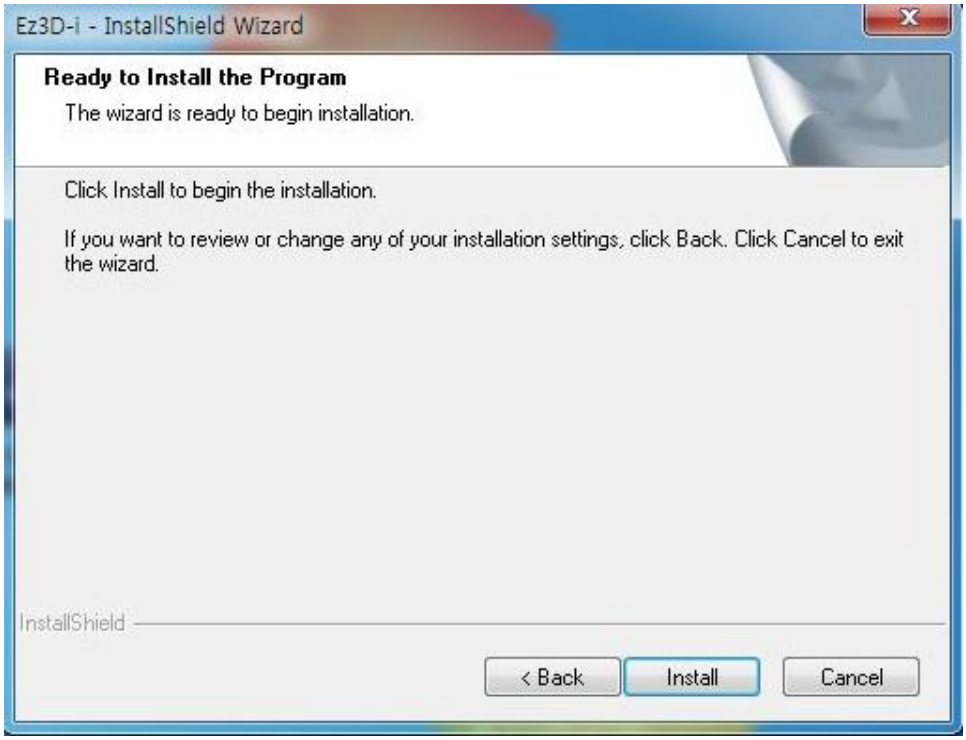



[Custom] installs only a part of the program features that the user selects.

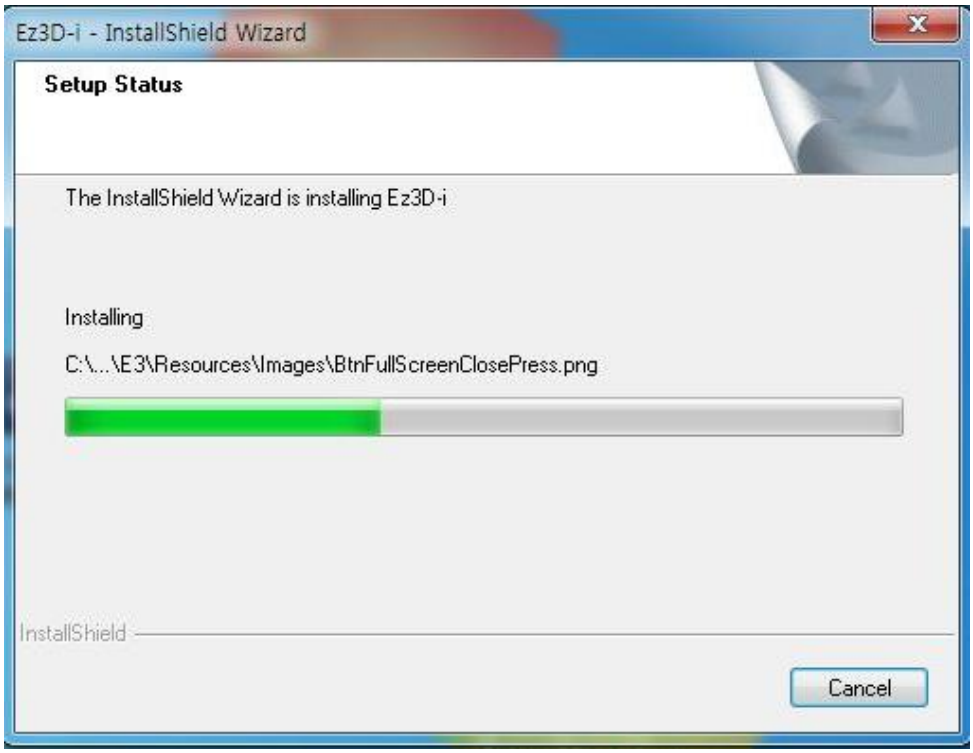
5. Select a location to install the program and click [Next] to continue with the installation.



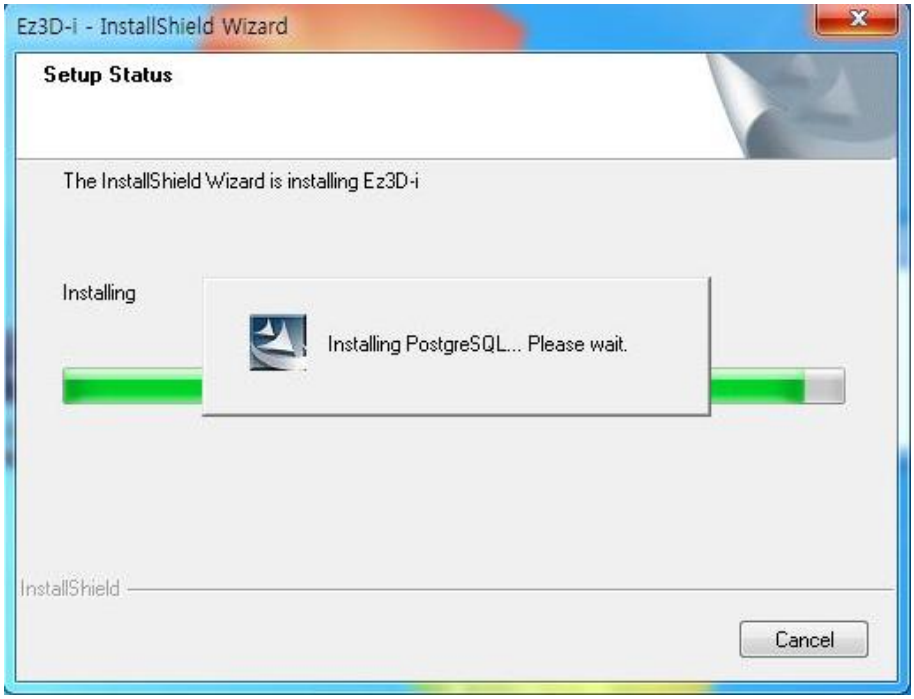
6. When the program installation is ready, click the [Install] button.


Ez3D-i - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

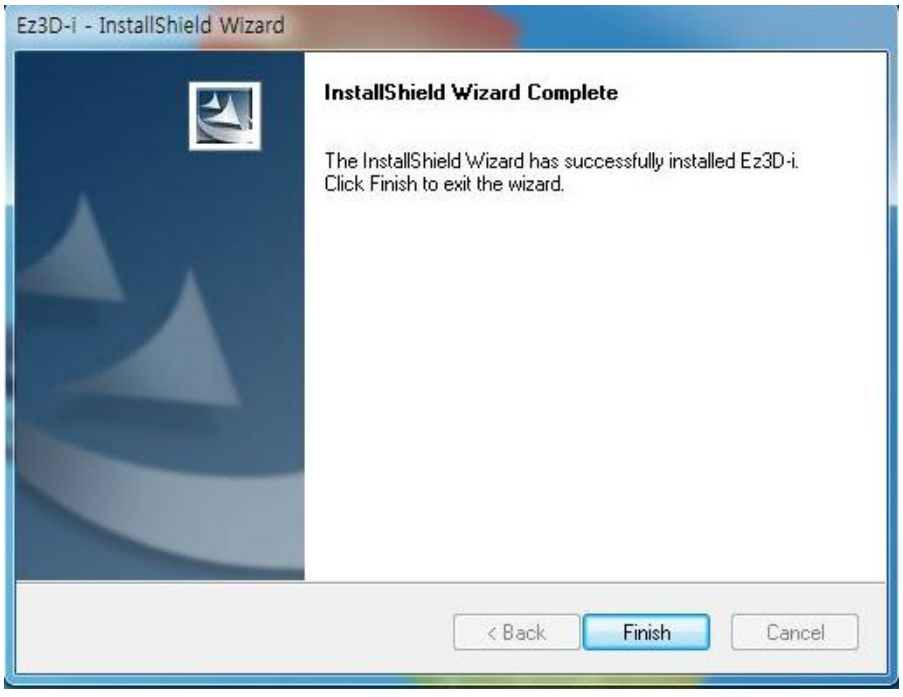
7. The installation program will proceed as follows:



8. PostgresSQL is installed as follows.




9. In the next window, click [Finish] to complete the installation.



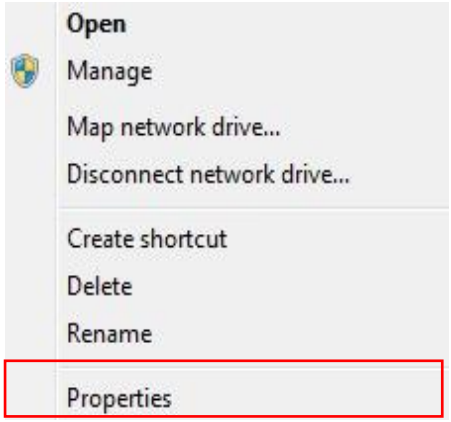

**Warning**

Once EzDent-i and Ez3D-i are installed, deleting them is not recommended. To proceed with deletion, please contact the customer service center.

**Information**

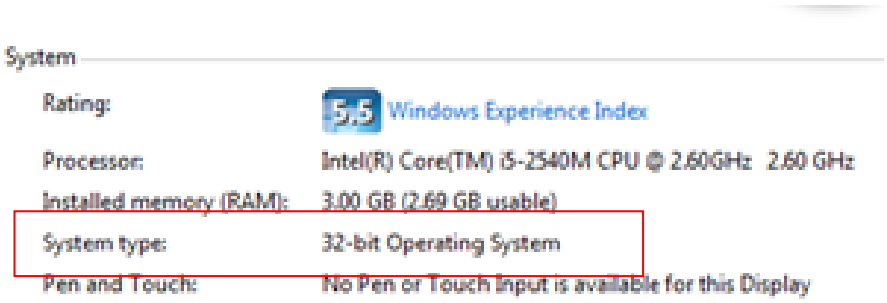
To select the installation file based on the type of the operating system.

1. Click and select the My computer icon.
2.Click the right mouse button.
3. Click the [Property] button when the following list appears.




3. View the system type on the following window. Installation files vary depending on the system type.

For 32-bit system, select and installEz3D-i(32).exe.
For 64-bit system, select and installEz3D-i(64).exe.



## 3-2. License Activation

**Information**

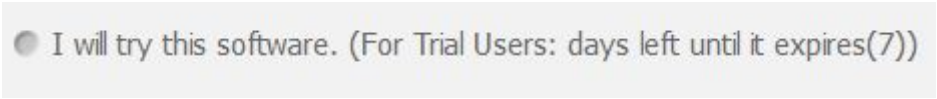
Activate the license.

A license key is a series of numbers provided to activate Ez3D-i.
Enter a license key and user information to use Ez3D-i without restriction.

There are three kinds of licenses for regular user, demo user and 7 days user.

Select the regular user option for successful authentication of the Ez3D-i product.

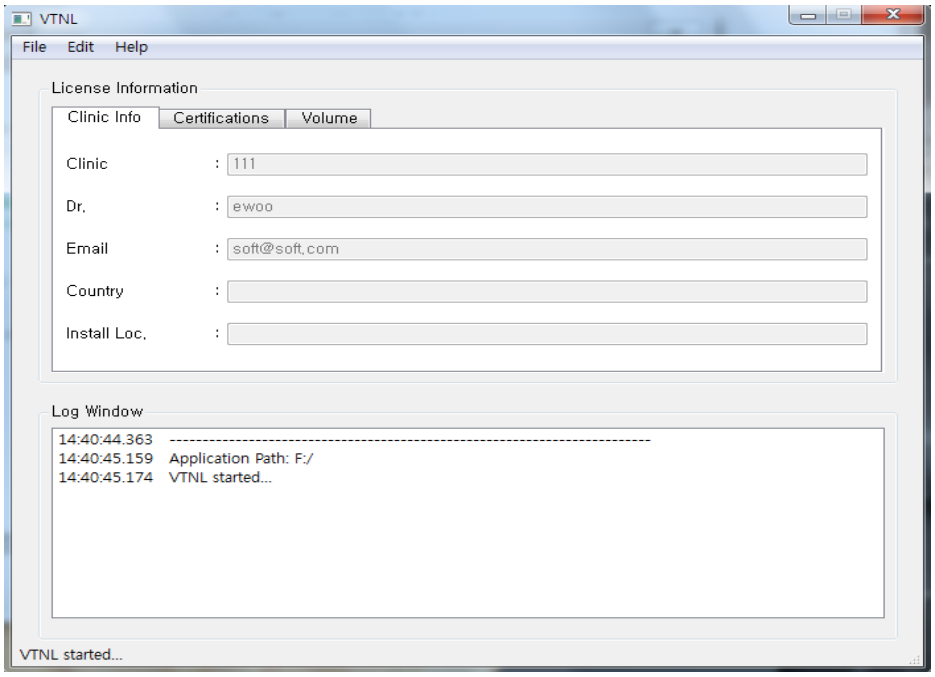
Select the demo user option to authenticate the Ez3D-i product demos.
It can be used only where an internet connection is available.




If you do not have either one of these two keys,
select the trial option to test the Ez3D-i product for 7 days.
It can be used where an internet connection is not possible.

### Activating for regular users

1. Connect the license USB to execute VTNL.exe file.
2. The following VTNL window appears.



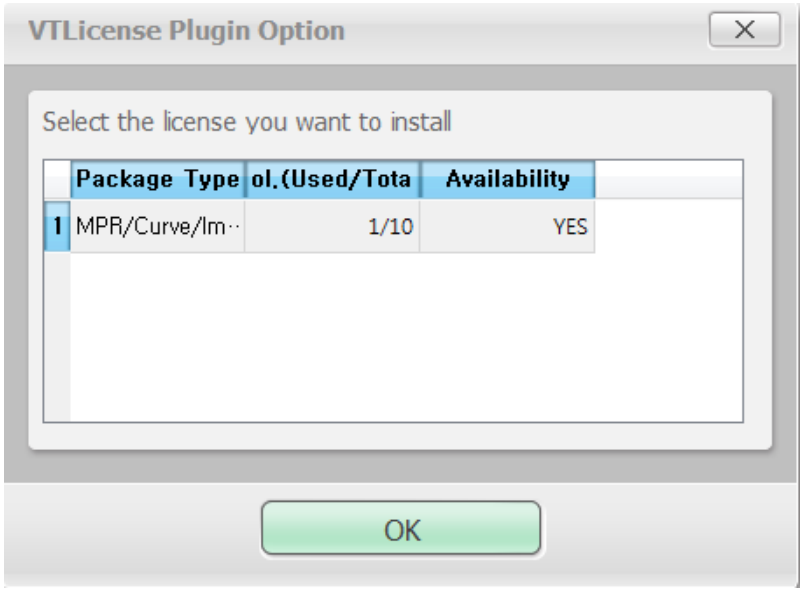
3. Double click the Ez3D-i icon on the desktop.

4.FollowingLicense Activation Wizard appears.

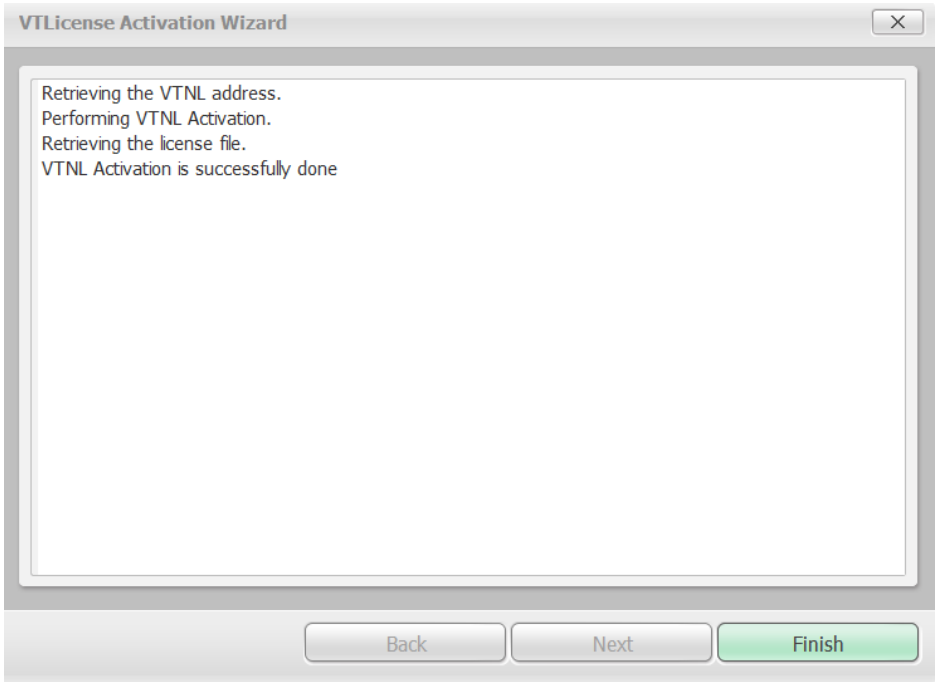
License Activation Wizard
Please select how you will activate your license.
I will activate my license with USB Dongle Key. (For regular users)
I will activate my license with License Key. (For demo users)
I will try this software. (For Trial Users: days left until it expires(7))
Back
Next
Cancel

5.Click and select the user license activation type.
6. Select the dongle key (first) item, and then click the [Next] button.

7. When the following VTLicense Plugin Option window appears, select the license keyfrom the list and install.

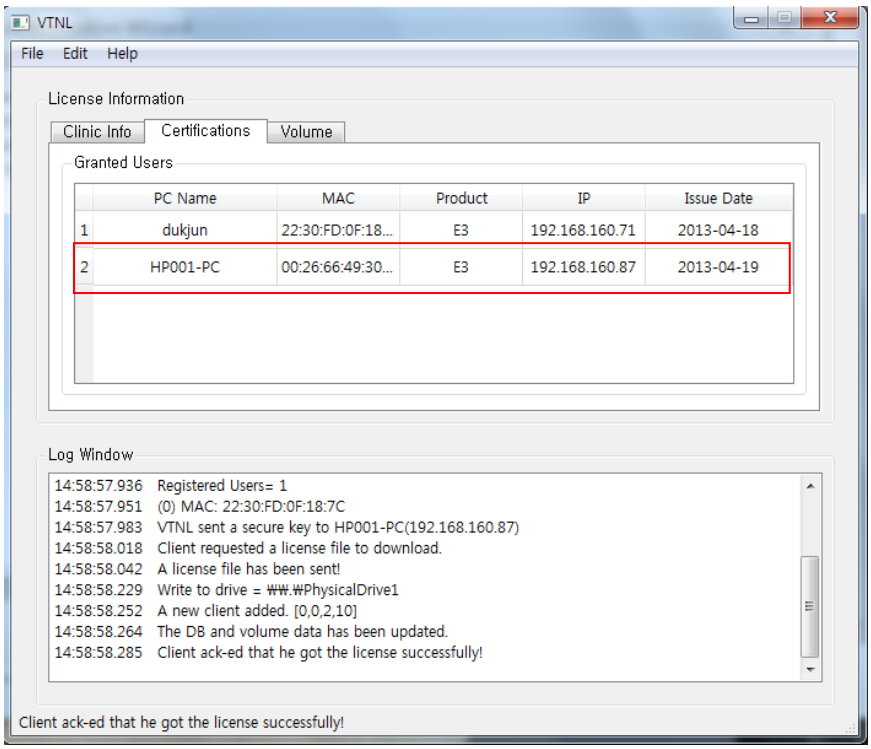



8. After clicking the [Ok] button, the following VTLicense Activation Wizard window appears.

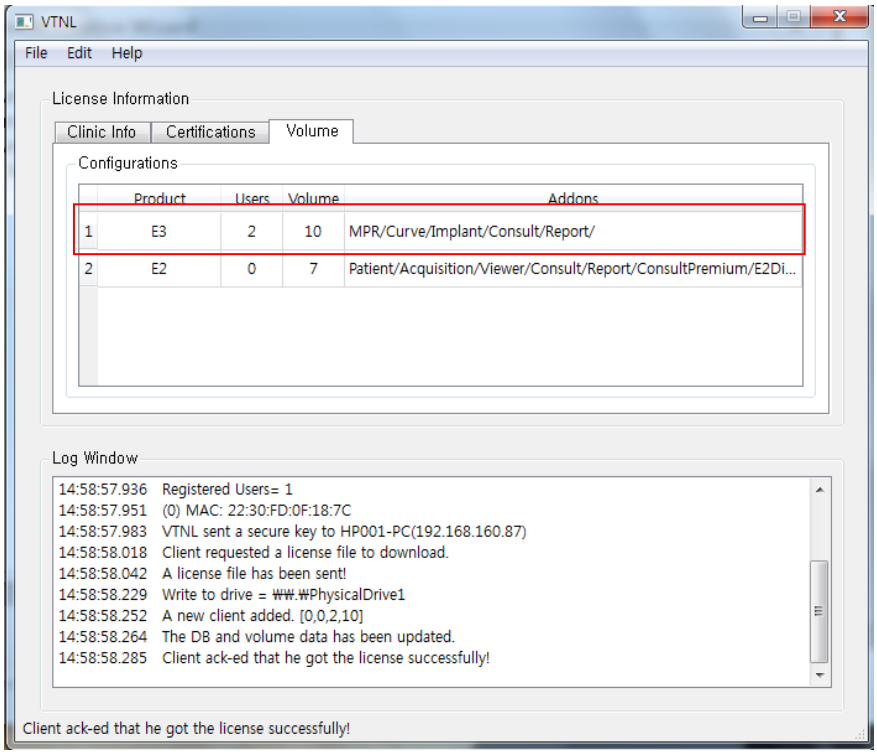



9. Once the license has been activated, click on the [Finish] button to finish.
10. Ez3D-i runs automatically.

11. Once the license has been activated, the user's PC will appear on the list of [Certifications] in the VTNL window.

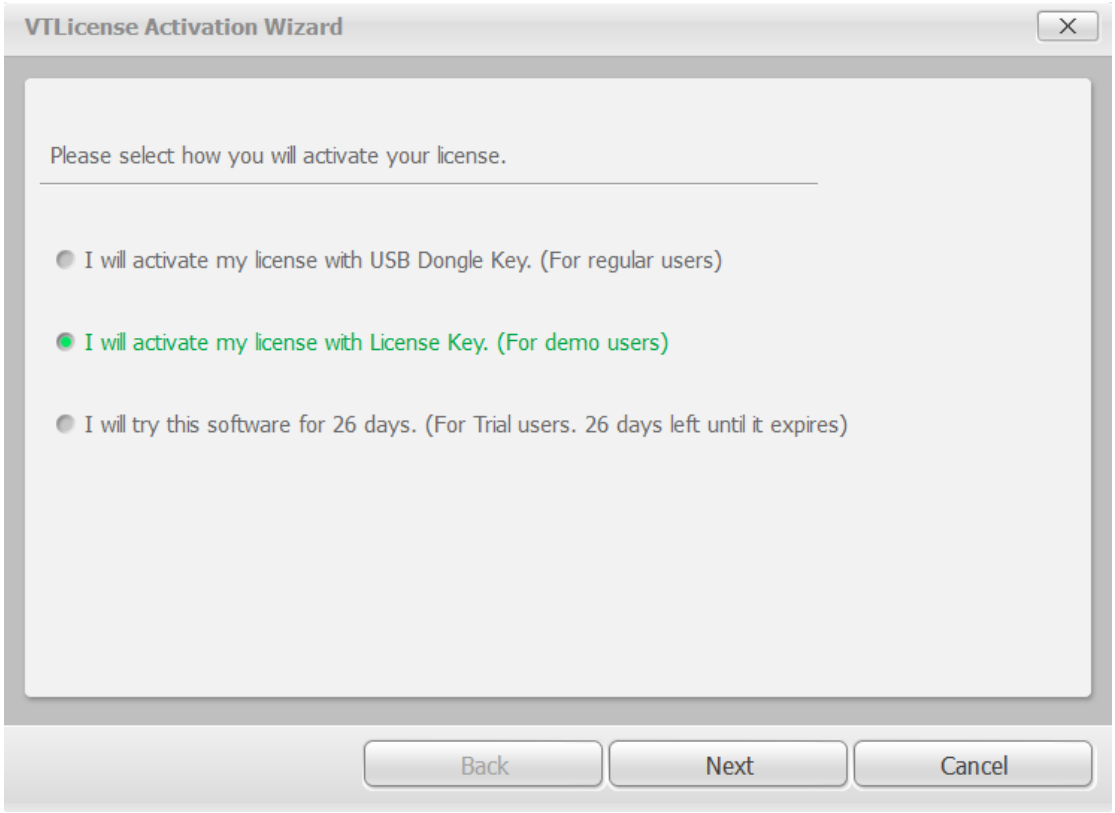

VTNL
File Edit Help
License Information
Clinic Info
Certifications
Volume
Granted Users
PC Name MAC Product IP Issue Date
1 dukjun 22:30:FD:0F:18... E3 192.168.160.71 2013-04-18
2 HP001-PC 00:26:66:49:30... E3 192.168.160.87 2013-04-19
Log Window
14:58:57.936 Registered Users= 1
14:58:57.951 (0) MAC: 22:30:FD:0F:18:7C
14:58:57.983 VTNL sent a secure key to HP001-PC(192.168.160.87)
14:58:58.018 Client requested a license file to download.
14:58:58.042 A license file has been sent!
14:58:58.229 Write to drive = ₩₩.₩PhysicalDrive1
14:58:58.252 A new client added. [0,0,2,10]
14:58:58.264 The DB and volume data has been updated.
14:58:58.285 Client ack-ed that he got the license successfully!
Client ack-ed that he got the license successfully!

12. The dongle license key number appears on the list of [Volume]in the VTNL window.

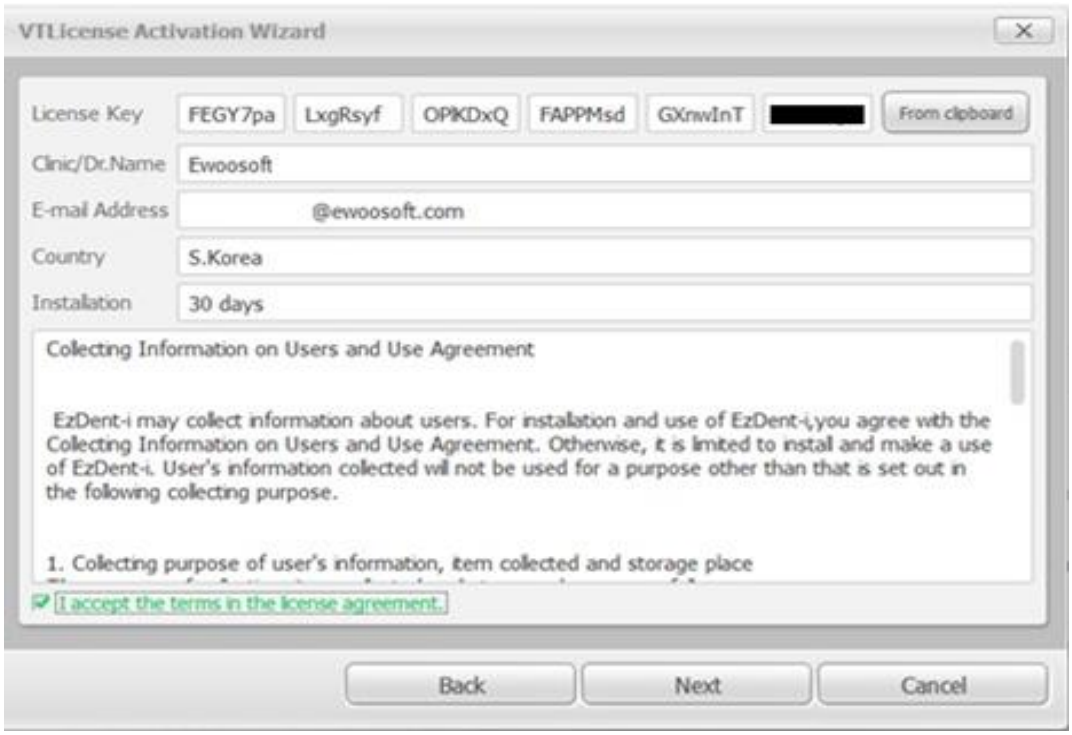

VTNL
File Edit Help
License Information
Clinic Info
Certifications
Volume
Configurations
Product Users Volume Addons
1 E3 2 10 MPR/Curve/Implant/Consult/Report/
2 E2 0 7 Patient/Acquisition/Viewer/Consult/Report/ConsultPremium/E2Di...
Log Window
14:58:57.936 Registered Users= 1
14:58:57.951 (0) MAC: 22:30:FD:0F:18:7C
14:58:57.983 VTNL sent a secure key to HP001-PC(192.168.160.87)
14:58:58.018 Client requested a license file to download.
14:58:58.042 A license file has been sent!
14:58:58.229 Write to drive = ₩₩.₩PhysicalDrive1
14:58:58.252 A new client added. [0,0,2,10]
14:58:58.264 The DB and volume data has been updated.
14:58:58.285 Client ack-ed that he got the license successfully!
Client ack-ed that he got the license successfully!

**Activating for demo users**

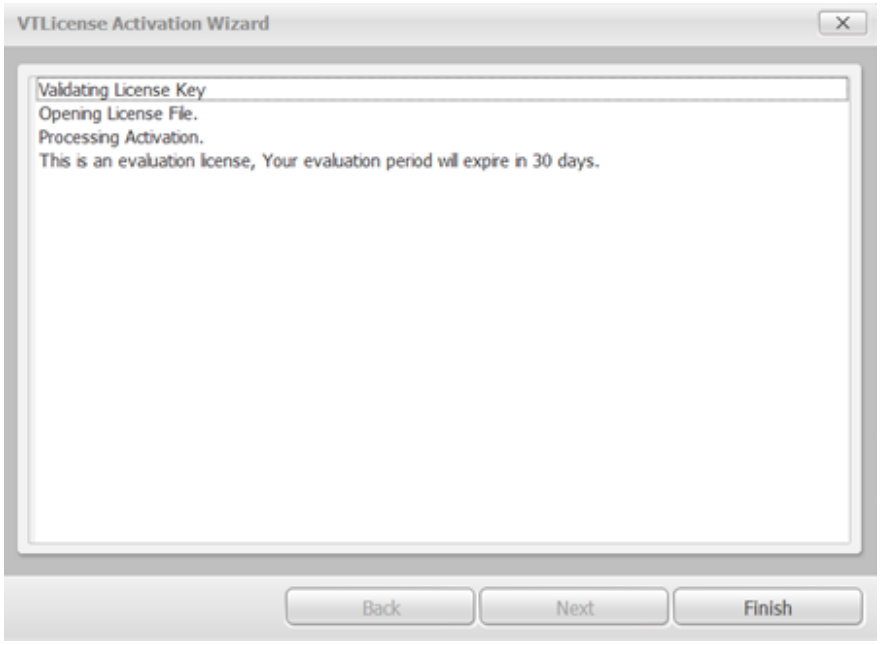
1. Select the second option on VTLicense Activation Wizard.


VTLicense Activation Wizard
Please select how you will activate your license.
I will activate my license with USB Dongle Key. (For regular users)
I will activate my license with License Key. (For demo users)
I will try this software for 26 days. (For Trial users. 26 days left until it expires)
Back
Next
Cancel

2. When clicking [From clipboard], license key is typed automatically.
   Then, enter the User Information and Click the [Next] button.


VTLicense Activation Wizard
License Key
FEGY7pa
LxgRsyf
OPKDxQ
FAPPMsd
GXrwInT
From clipboard
Clinic/Dr.Name
Ewoosoft
E-mail Address
@ewoosoft.com
Country
S.Korea
Installation
30 days
Collecting Information on Users and Use Agreement
EzDent-i may collect information about users. For installation and use of EzDent-i, you agree with the Collecting Information on Users and Use Agreement. Otherwise, it is limited to install and make a use of EzDent-i. User's information collected will not be used for a purpose other than that is set out in the following collecting purpose.
1. Collecting purpose of user's information, item collected and storage place
I accept the terms in the license agreement.
Back
Next
Cancel

3. When the license is normally activated, the following window appears. Click the [Finish] button.

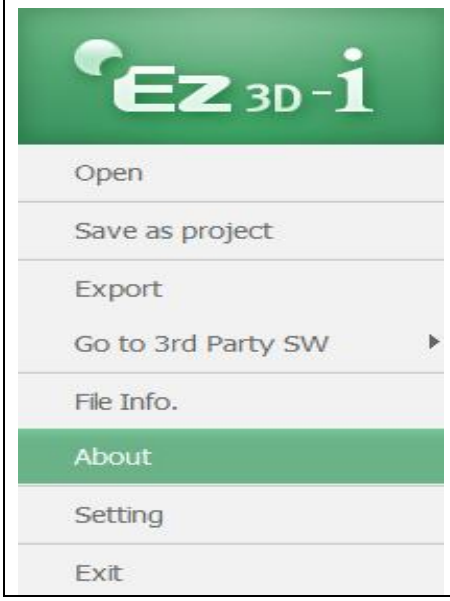



**Tip**

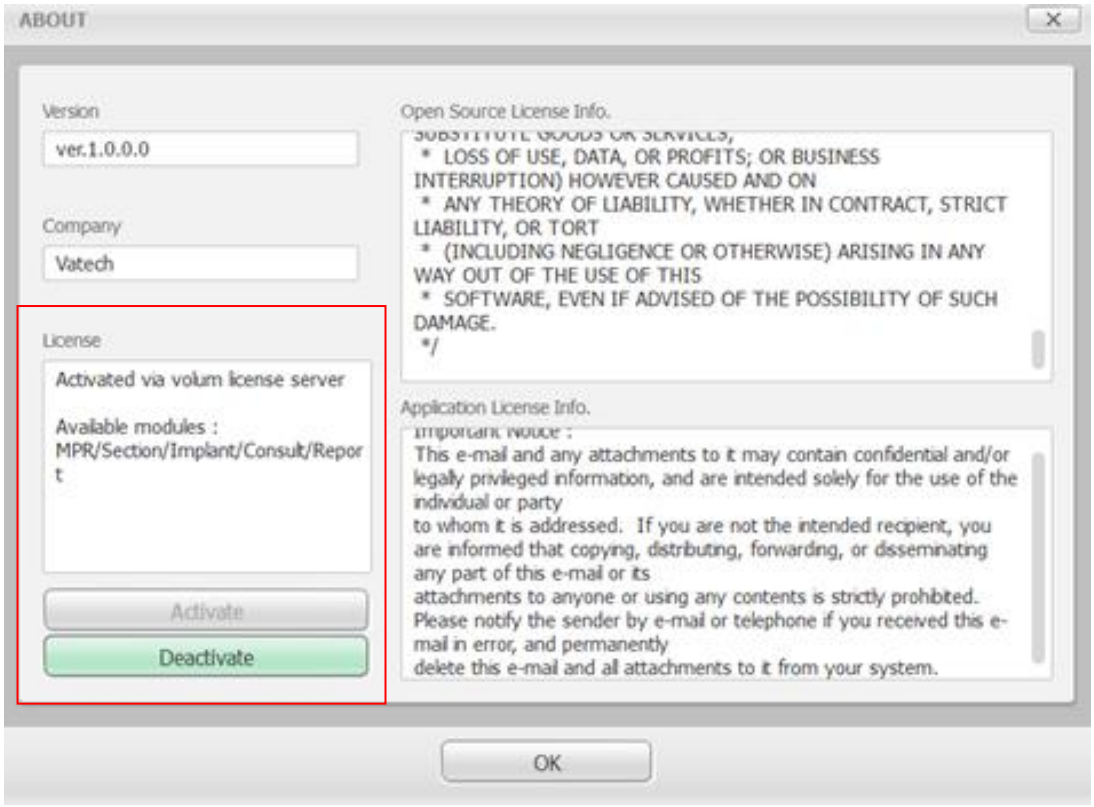
Check the license status.

1. Click the following Ez3D-i main button.

2. Click the [About] button.

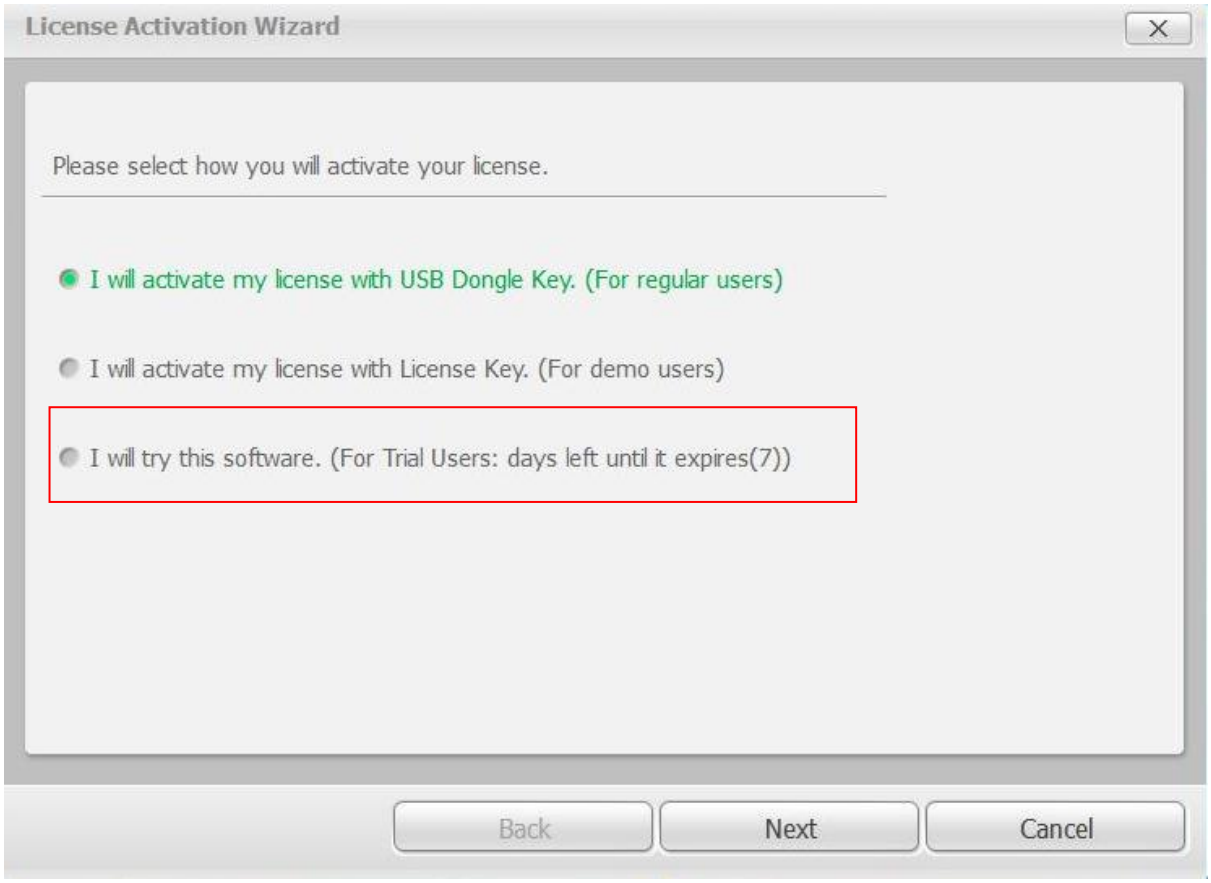


3. Check the license information in the About window.


ABOUT
Version
ver.1.0.0.0
Company
Vatech
License
Activated via volum license server
Available modules :
MPR/Section/Implant/Consult/Repor
t
Activate
Deactivate
Open Source License Info.
* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON
* ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT
* (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY
WAY OUT OF THE USE OF THIS
* SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH
DAMAGE.
*/
Application License Info.
This e-mail and any attachments to it may contain confidential and/or
legally privileged information, and are intended solely for the use of the
individual or party
to whom it is addressed. If you are not the intended recipient, you
are informed that copying, distributing, forwarding, or disseminating
any part of this e-mail or its
attachments to anyone or using any contents is strictly prohibited.
Please notify the sender by e-mail or telephone if you received this e-
mail in error, and permanently
delete this e-mail and all attachments to it from your system.
OK

**Activating for 7 days users.**

1. Select the third option at License Activation Wizard and click the [Next] button.


License Activation Wizard
Please select how you will activate your license.
I will activate my license with USB Dongle Key. (For regular users)
I will activate my license with License Key. (For demo users)
I will try this software. (For Trial Users: days left until it expires(7))
Back
Next
Cancel

2. 7 days Trial Version of Ez3D-i gets started.

**Notice**

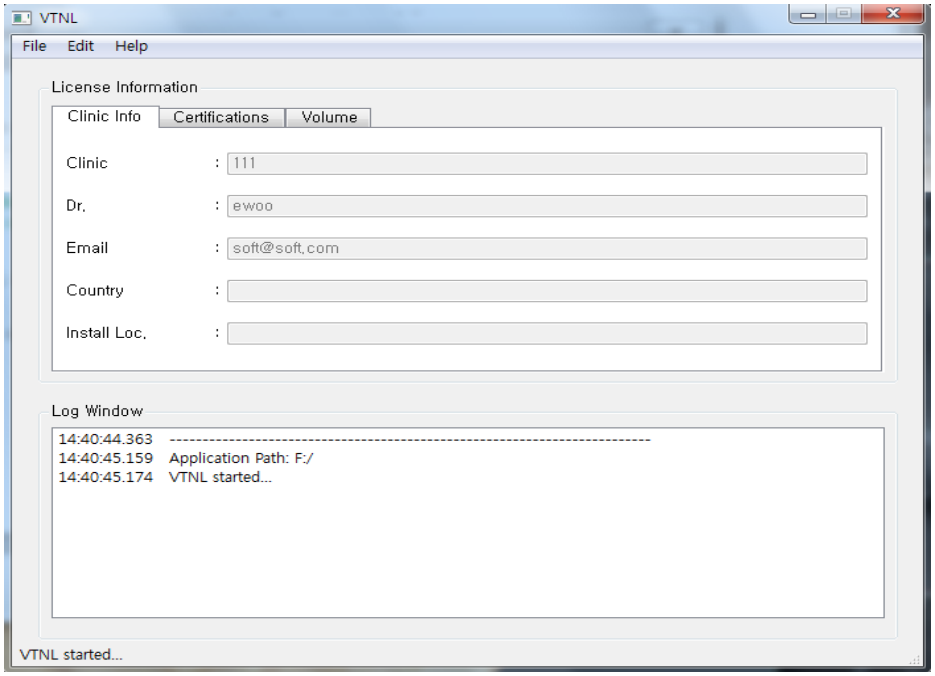
When 7 days have passed, the user should register as a regular user to use Ez3D-i.

## 3-3.License Deactivation

**Note**

The license deactivation is only available for regular users.
The number of users in a license is limited.
If the user wants to use Ez3D-i on another PC, the license that the user uses has to be deactivated.

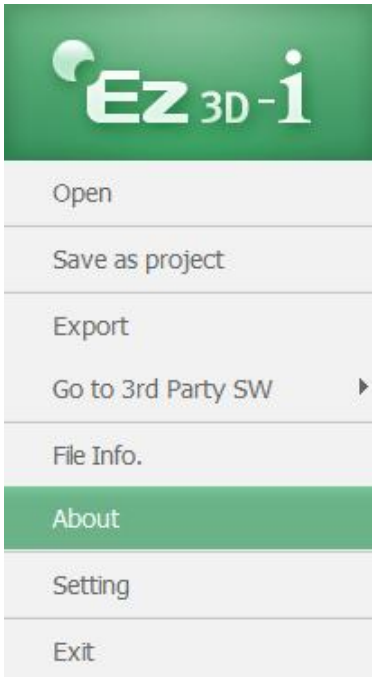
1. Connect the license USB to execute VTNL.exe file.
2. The following VTNL window appears.



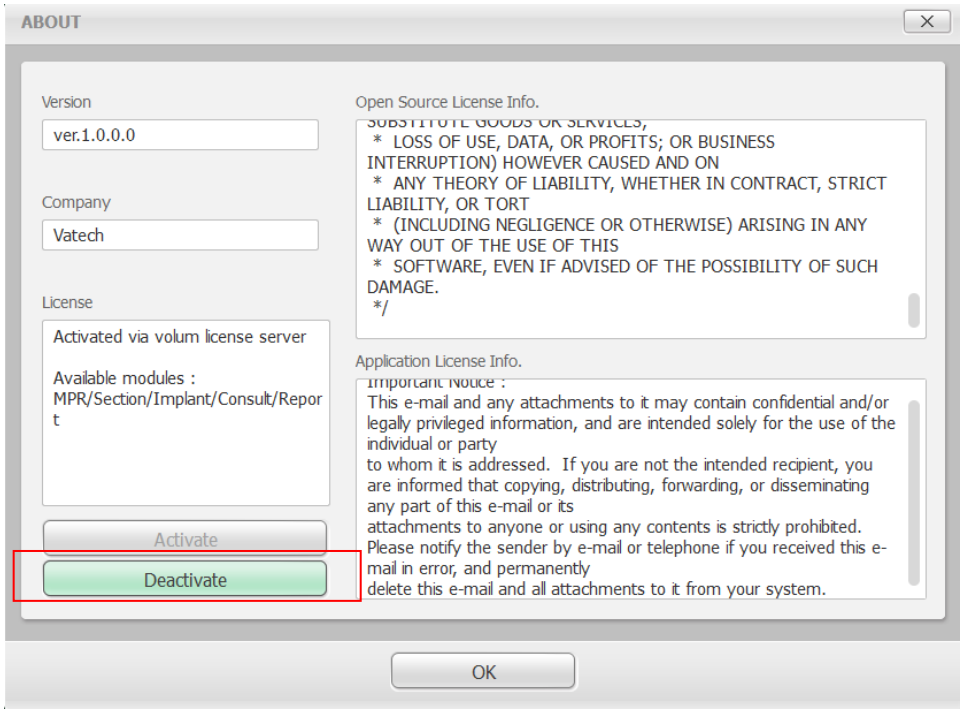

3. Double click the Ez3D-i icon on the desktop.

4. Click the following Ez3D-i main button.

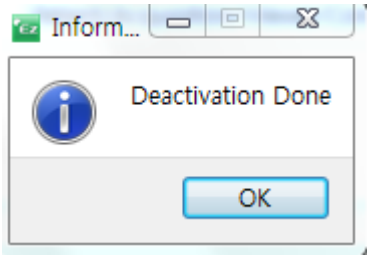
5. From the following list, click the [About] button.




6.When the[About]window appears, click the [Deactivate] button at the bottom of the window.

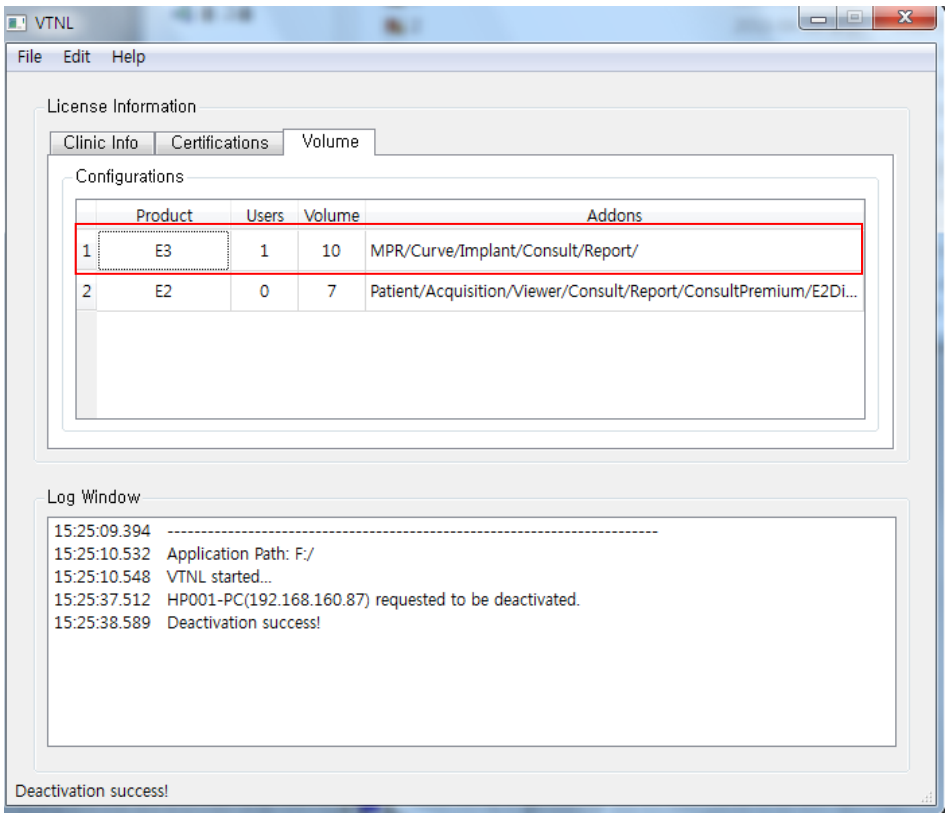

ABOUT
Version
ver.1.0.0.0
Company
Vatech
License
Activated via volum license server
Available modules :
MPR/Section/Implant/Consult/Report
Activate
Deactivate
Open Source License Info.
* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
* ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
* (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
* SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
*/
Application License Info.
This e-mail and any attachments to it may contain confidential and/or legally privileged information, and are intended solely for the use of the individual or party
to whom it is addressed. If you are not the intended recipient, you are informed that copying, distributing, forwarding, or disseminating any part of this e-mail or its
attachments to anyone or using any contents is strictly prohibited. Please notify the sender by e-mail or telephone if you received this e-mail in error, and permanently
delete this e-mail and all attachments to it from your system.
OK

7. When the license is deactivated, the following [Information] window appears.




8. Click the [OK] buttonto close the Ez3D-i program automatically.

9. When the license is deactivated, the corresponding dongle license key is erased from the list of [Volume] in the VTNL window.




**Tip**

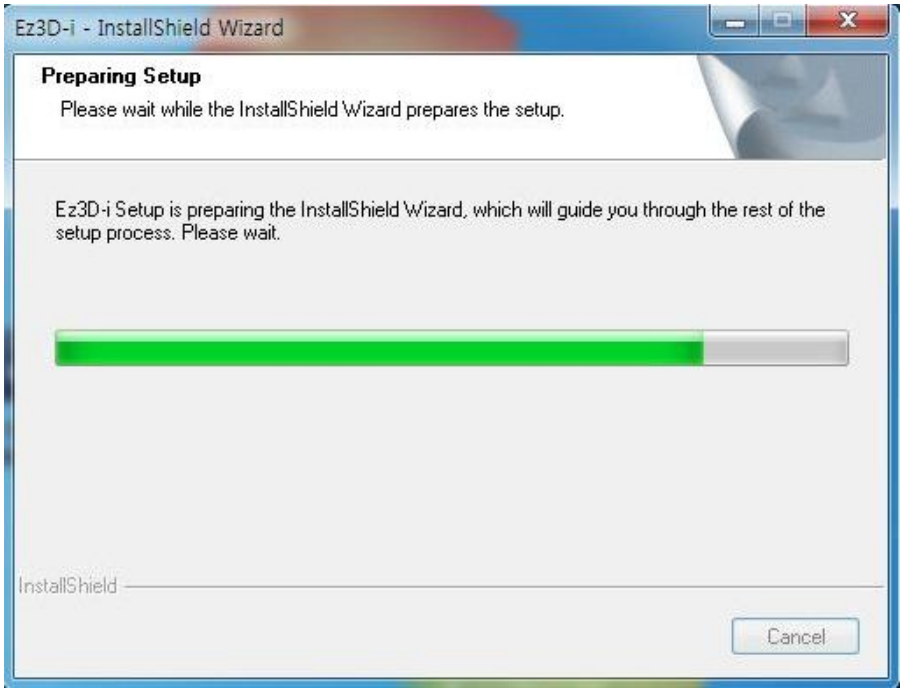
If the user wants to activate a license on another PC, please refer to '3-2. License Activation'.
If the user needs extra license, please contact the customer service center.

## 3-4. Ez3D-i Update

**Note**

Double click the installation file from a new version of Ez3D-i to proceed with the update of the existing Ez3D-i as follows.

1. When double clicking the installation file for the new version of Ez3D-i, the following InstallShield Wizard window appears.


Ez3D-i - InstallShield Wizard
Preparing Setup
Please wait while the InstallShield Wizard prepares the setup.
Ez3D-i Setup is preparing the InstallShield Wizard, which will guide you through the rest of the setup process. Please wait.
InstallShield
Cancel

2. Select your choice from the list below by clicking it.

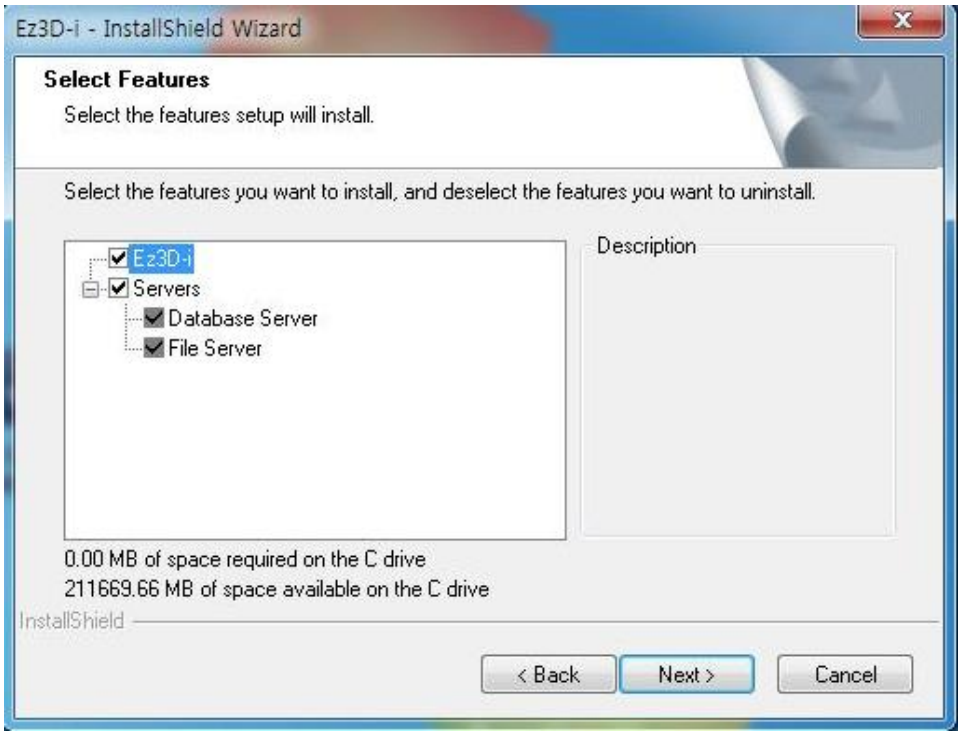
**Information**

'Modify' updates only the files selected by the user.
A window appears where the user can select the files to update.

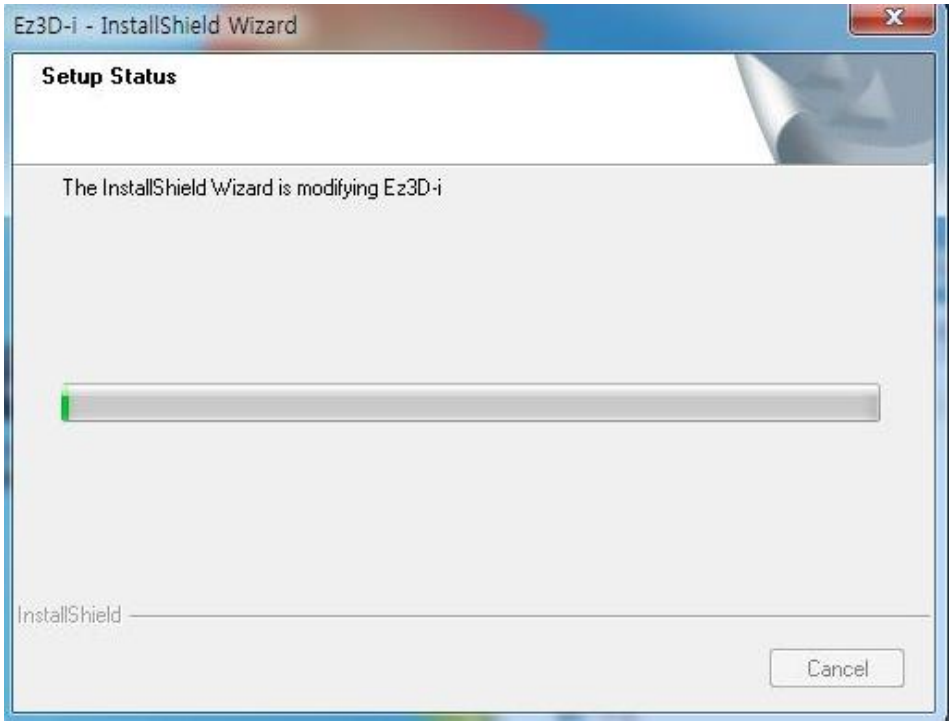
'Repair' updates all the files that the user has previously installed.
The update will proceed immediately without the window which a user can select the file to update.

Ez3D-i - InstallShield Wizard
Welcome
Modify, repair, or remove the program.
Welcome to the Ez3D-i Setup Maintenance program. This program lets you modify the current installation. Click one of the options below.
Modify
Select new program features to add or select currently installed features to remove.
Repair
Reinstall all program features installed by the previous setup.
Remove
Remove all installed features.
InstallShield
< Back
Next >
Cancel

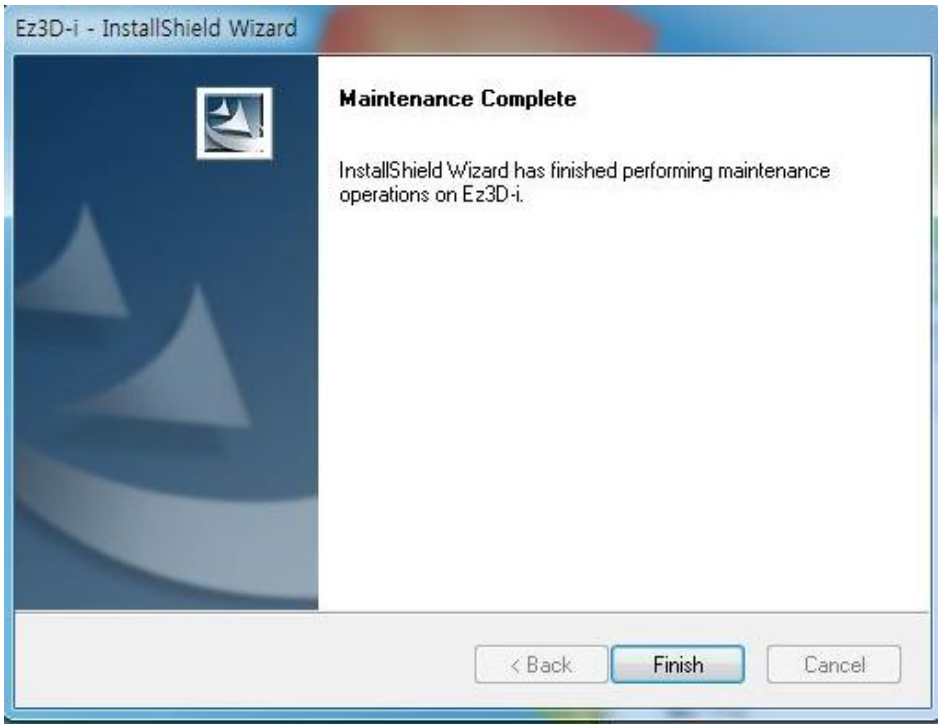
3. Choose[Modify] option to select the files to update in the following window. Check the files to install update and then click the [Next] button.


Ez3D-i - InstallShield Wizard
Select Features
Select the features setup will install.
Select the features you want to install, and deselect the features you want to uninstall.
Ez3D-i
Servers
Database Server
File Server
Description
0.00 MB of space required on the C drive
211669.66 MB of space available on the C drive
InstallShield
< Back
Next >
Cancel

4. The update will proceed as follows.



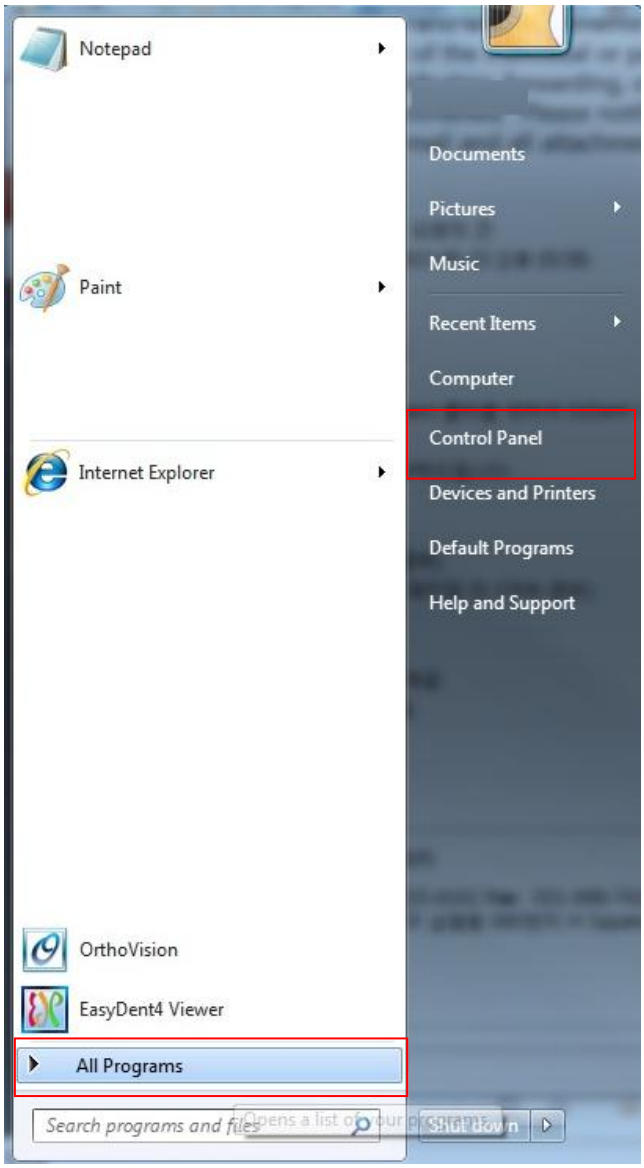

5. Click [Finish] to complete the update.



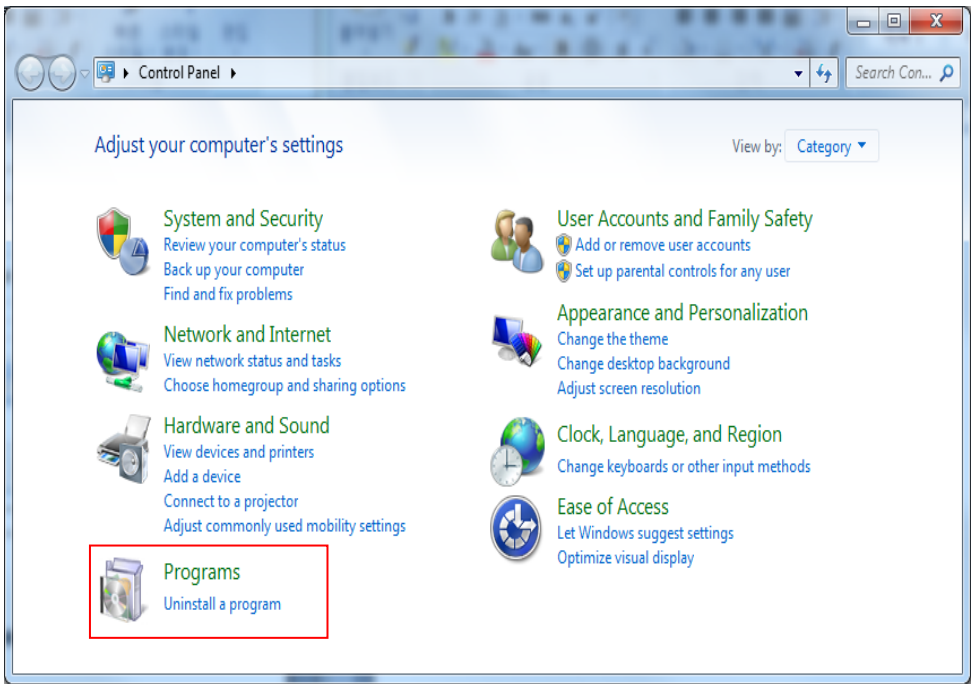
### 3-5. Ez3D-i Deletion

1. Click the Start button on the following window.

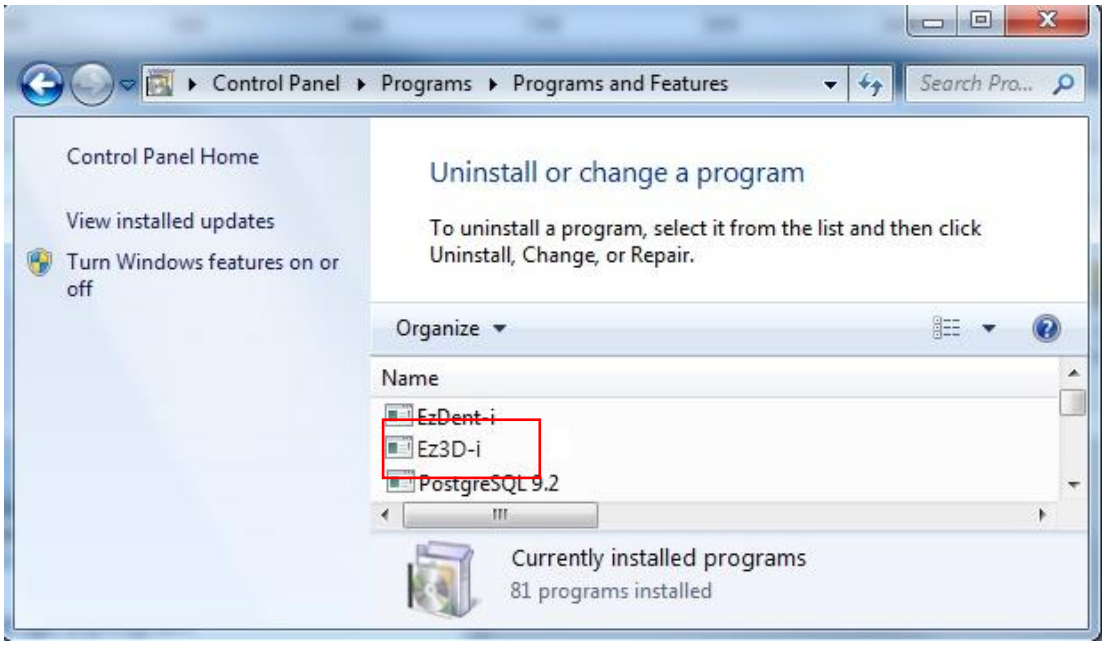
2. Click [All Programs] and then click [Control Panel].



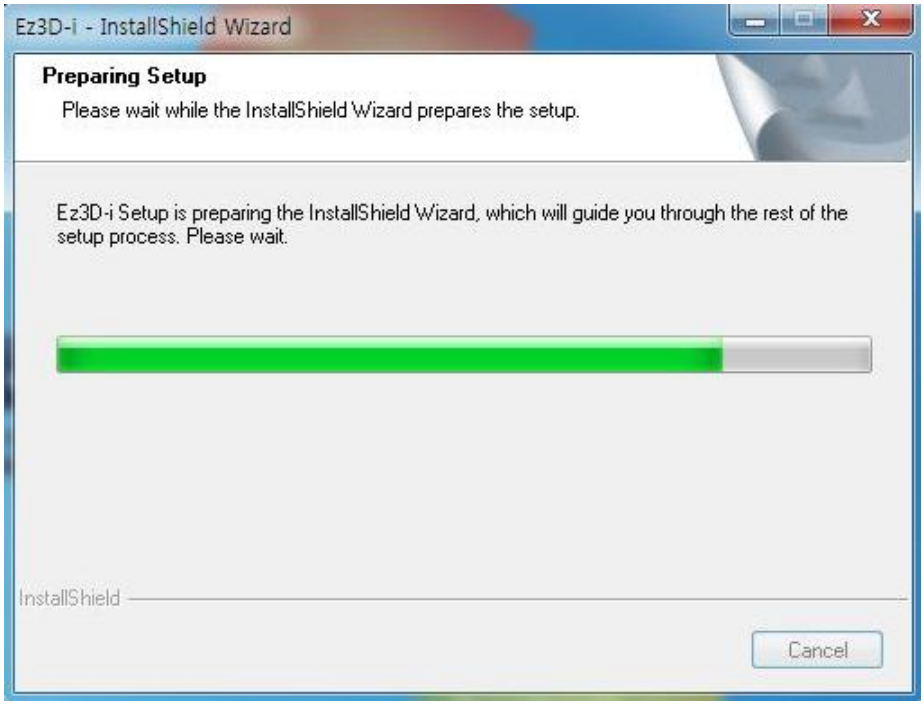
3. Click [Uninstall a program].



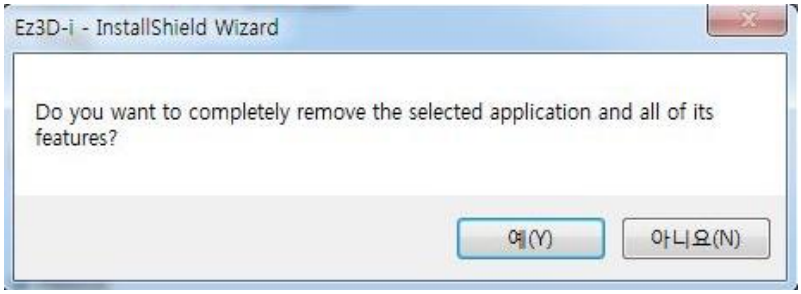

4. Double Click [Ez3D-i] in the following window.



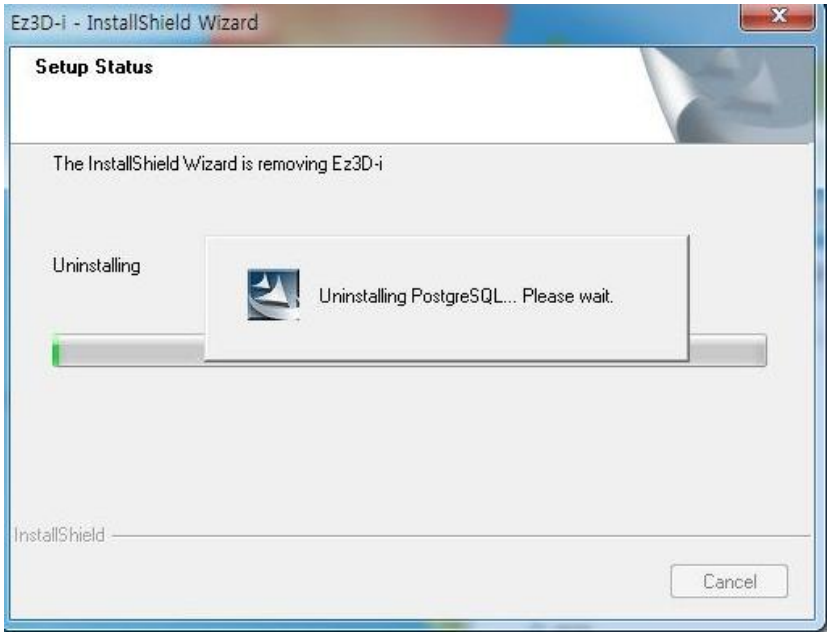
5.The[Install Shield Wizard] window appears and the program deletion will proceed.


Ez3D-i - InstallShield Wizard
Preparing Setup
Please wait while the InstallShield Wizard prepares the setup.
Ez3D-i Setup is preparing the InstallShield Wizard, which will guide you through the rest of the setup process. Please wait.
InstallShield
Cancel

6. The following window appears to confirm the deletion of Ez3D-i. Click the [Yes] button to select.



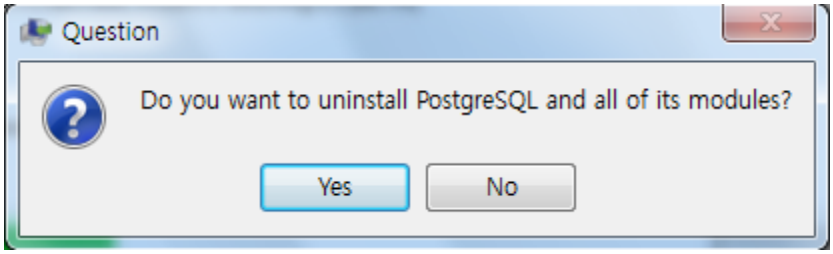
7. The program deletion will proceed as follows.




8. The following window appears to confirm PostgresSQL deletion. Click the [Yes] button to select.

**Warning**

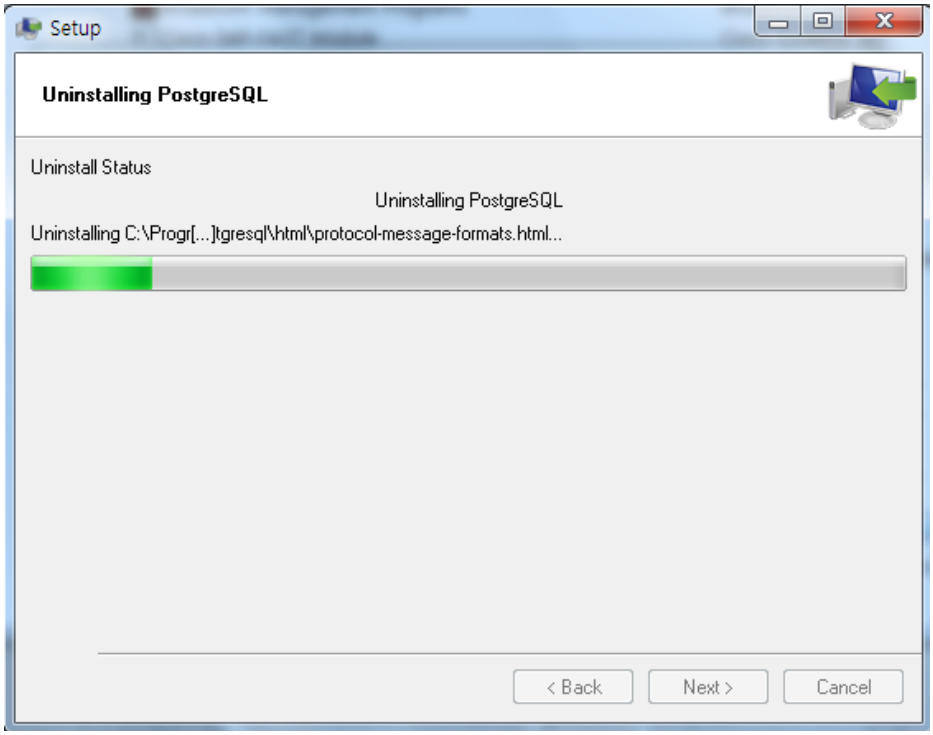
Please do not uninstall PostgresSQL if the user wants to delete only Ez3D-i in the user's PC where the both EzDent-i and Ez3D-i are installed.



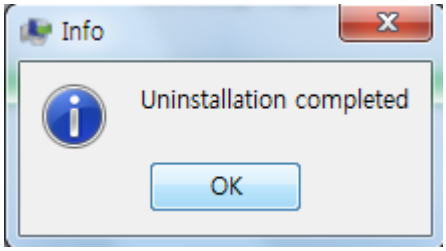

**Warning**

Before proceeding with the PostgresSQL deletion, please back up all of your documents.

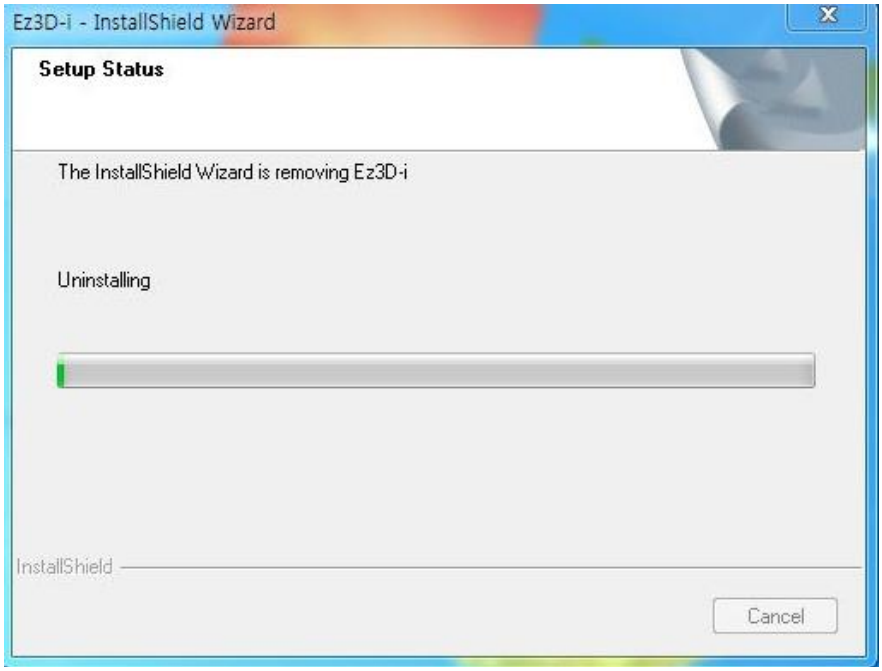
9. PostgresSQL deletion will proceed as follows.



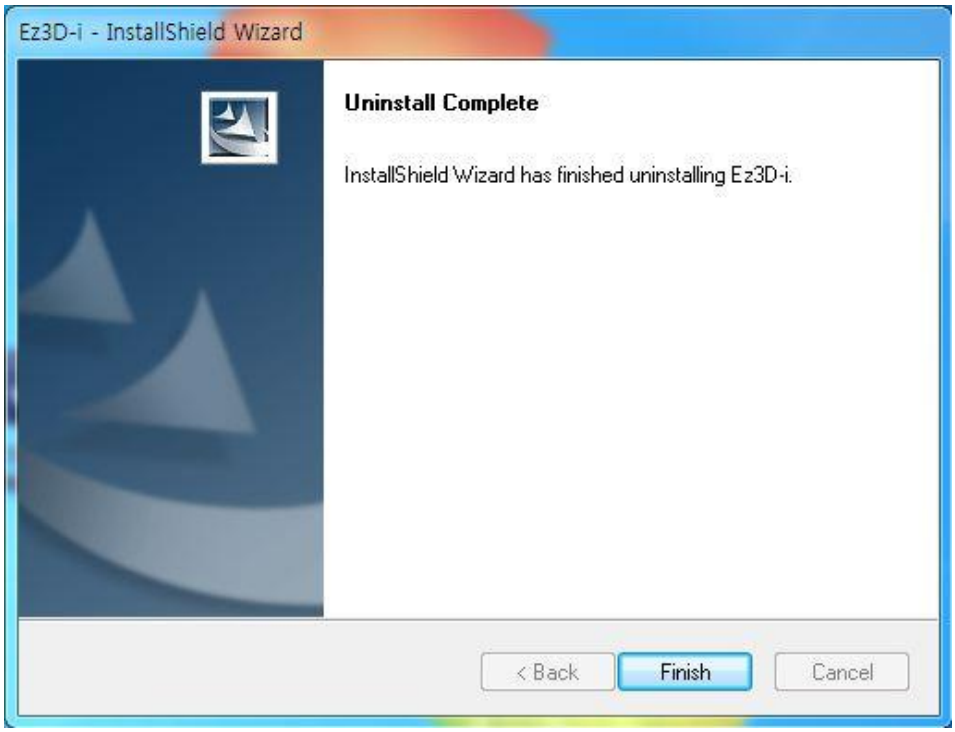

10.The Info window appears after PostgresSQL is uninstalled. Click the [Ok] button.



11. The program deletion will proceed as follows.




12. The following window appears after the uninstallation is completed. Click the [Finish] button to complete.




**Warning**

Once EzDent-i and Ez3D-i are installed, deleting them is not recommended. To proceed with deletion, please contact the customer service center.

# 4. Main Features of Ez3D-i

## 4-1. How to open and close the program

### Guide1. Opening the program

Ez3D-i is executed through EasyDent, EzDent-i or by double clicking the Ez3D-i icon on the desktop.
The following is more detailed procedures.

**Opening through EzDent-i**

1. Double click the CT images on the images of EzDent-i.
2. Ez3D-i is linked to EzDent-i and Ez3D-i is executed automatically.

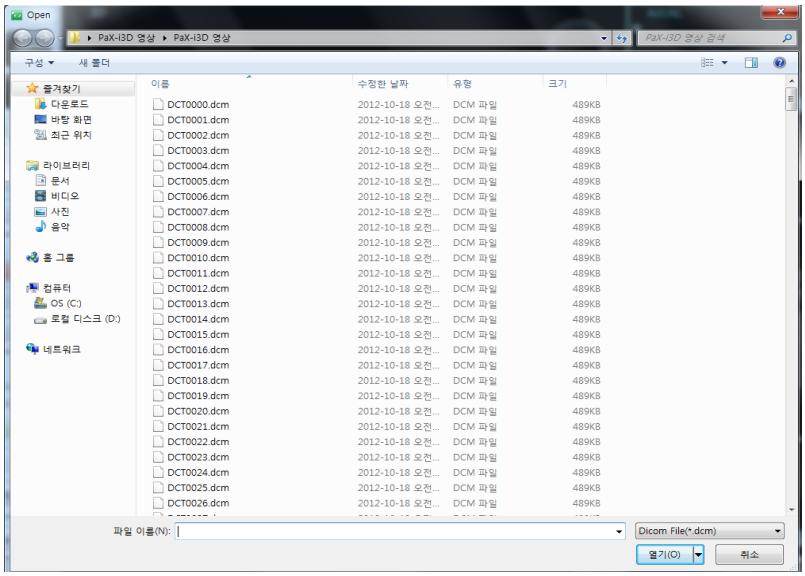
**Opening Ez3D-i directly**

1. Double click the icon of Ez3D-i on the desktop.  Ez3D-i is executed.

Ez 3D-i
3D IMAGING DENTAL SOFTWARE
Searching plug-in modules...
Convenient 2D and 3D image observation with the ability to access all the functions of application with a single click of the mouse. Quicker image analysis using Cross-Sectional View, whitch processes vertical images of the denal arch.
Copyright (C) 2013 VATECH Global Co.,Ltd
VATECH

**>> Ez3D-i Icon>>Run Ez3D-i**

2. The following [Open] window appears.



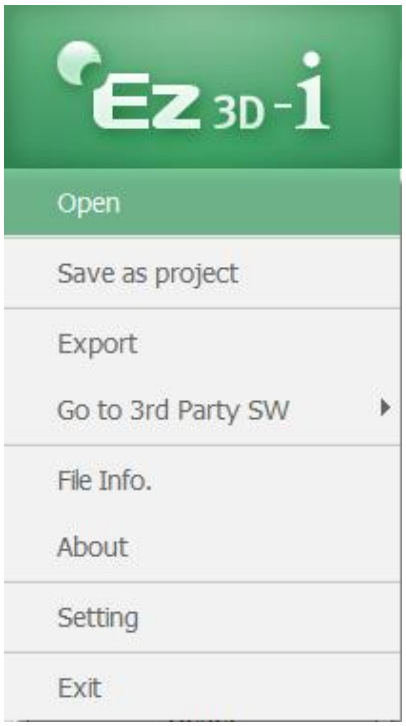

3. Select a file in the folder and then click the [Open] button.
4. The selected file will be loaded as follows.

5. Once the loading is complete, the first Ez3D-i screen appears as follows.

**Tip**

Utilize the main button.

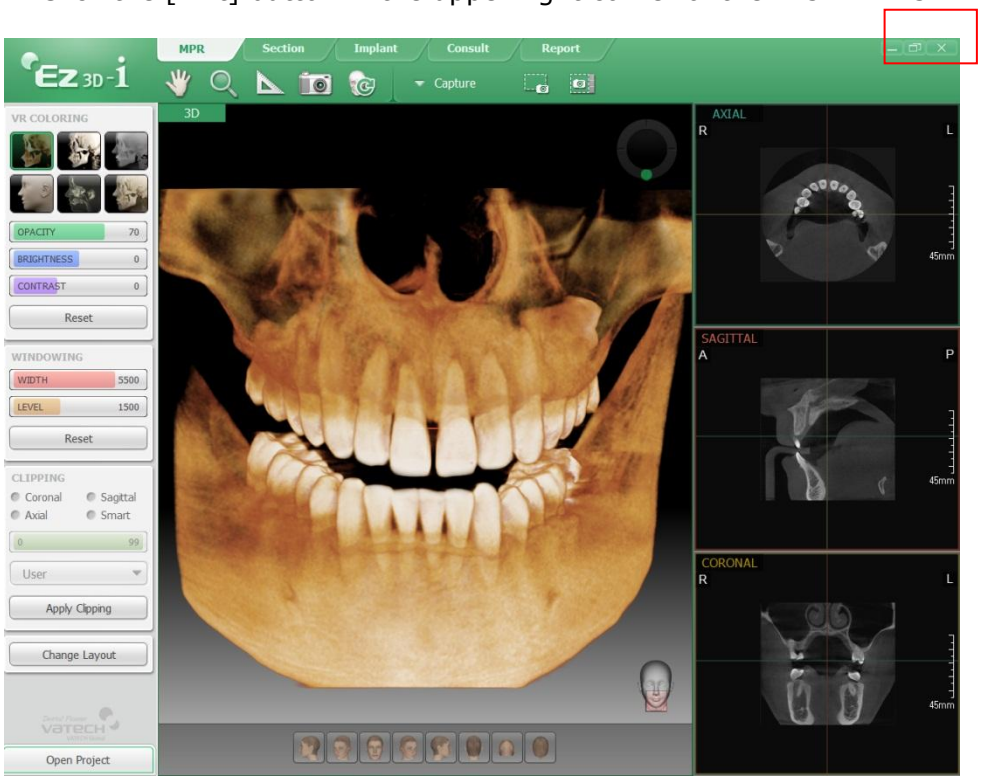
1. The following window appears after clicking the main button.




2. Click the [Open] button. The[Open] window appears.
3. Proceed with the same way as 4-1➔ Guide 1➔'OpeningEz3D-i directly'.

**Guide 2. Closing the program**

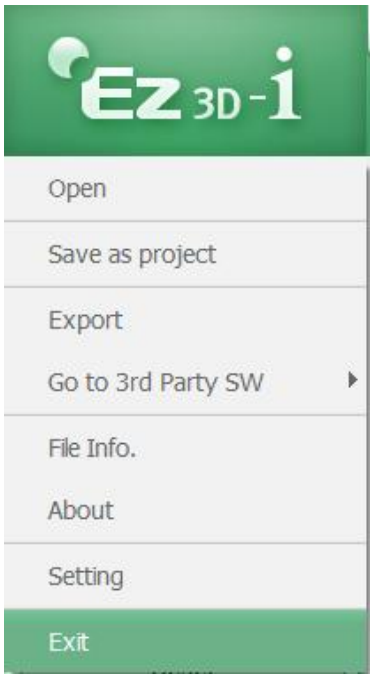
1. Click the [Exit] button in the upper right corner of the Ez3D-i. Ez3D-i is closed.



**Tip**

Utilize the main button.

1. The following window appears after clicking the main button.




2. When clicking the [Exit] button, Ez3D-i is closed.

### Guide 3. Utilizing the main button

**Note**

Configuration of the main button

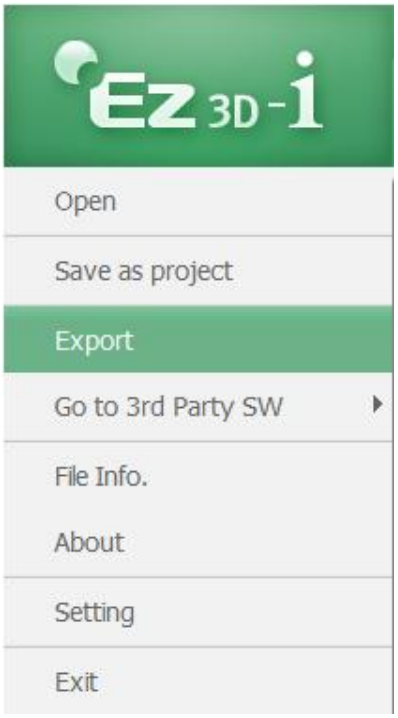
Open a file, save a project, export a file, export to other software, read the file data, E3 look up, set, exit the program.

### Exporting files

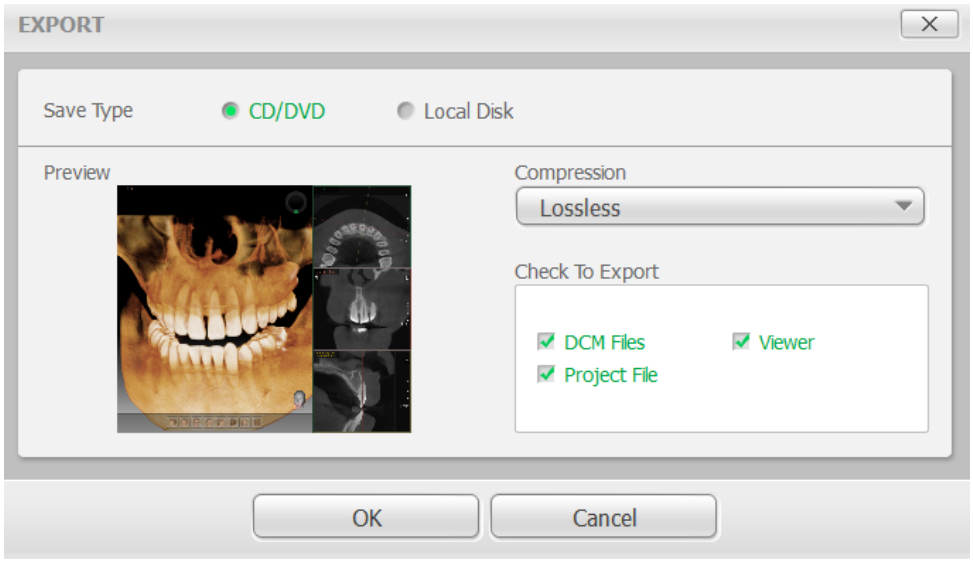
**Note**

Burn the working file on CD/DVD or save on the local disk.

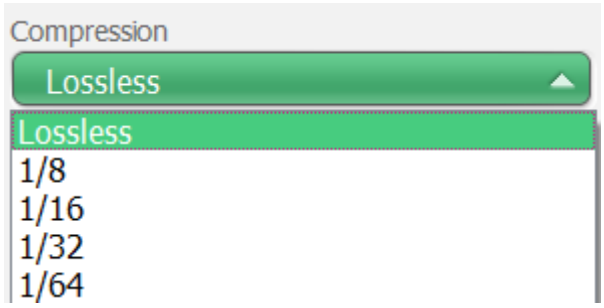
1. The following list appears when the main button is clicked.
2. Click[Export].




3.The Export window appears as follows.




4.Click to select the location to export the file in the Save Type.
5. Click to select one of the File Compression options as follows.

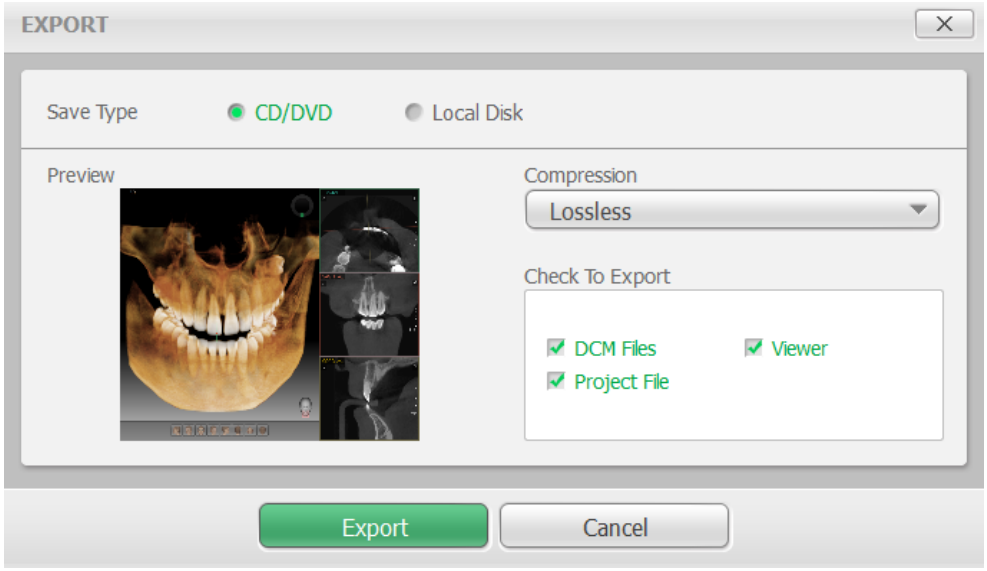



6. Select the type of file to export to [Check To Export]. DCM is the default file type for exportable files.
7. Click the [Ok] button.

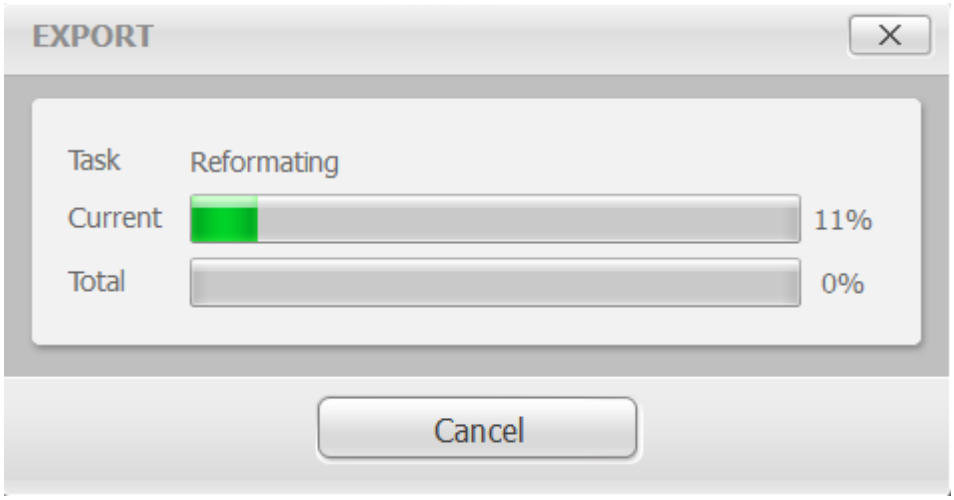
**Information**

Save on CD/ DVD

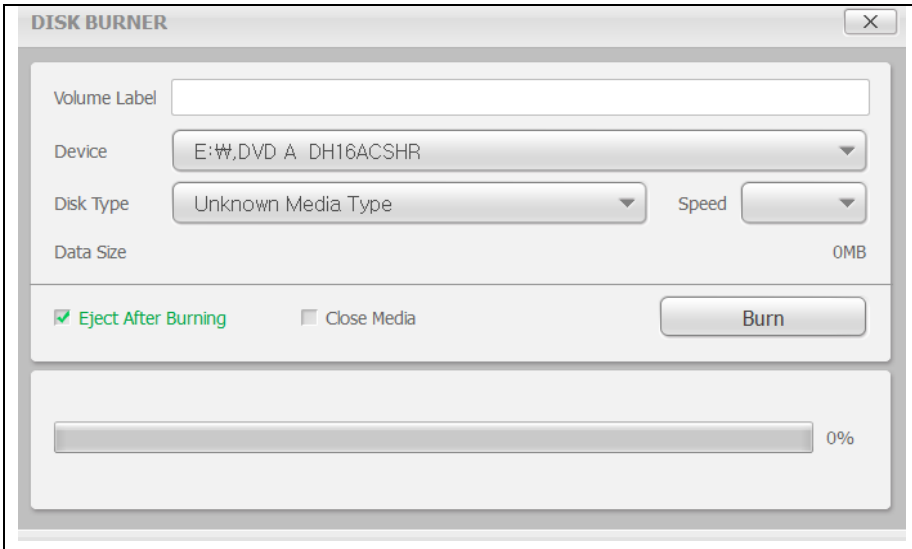
1. Click [CD/DVD] on the Save Type.
2. Click the following [Export] button.




3. The Export window appears as follows.




4. When the process is complete, the Disk Burner window appears as follows.

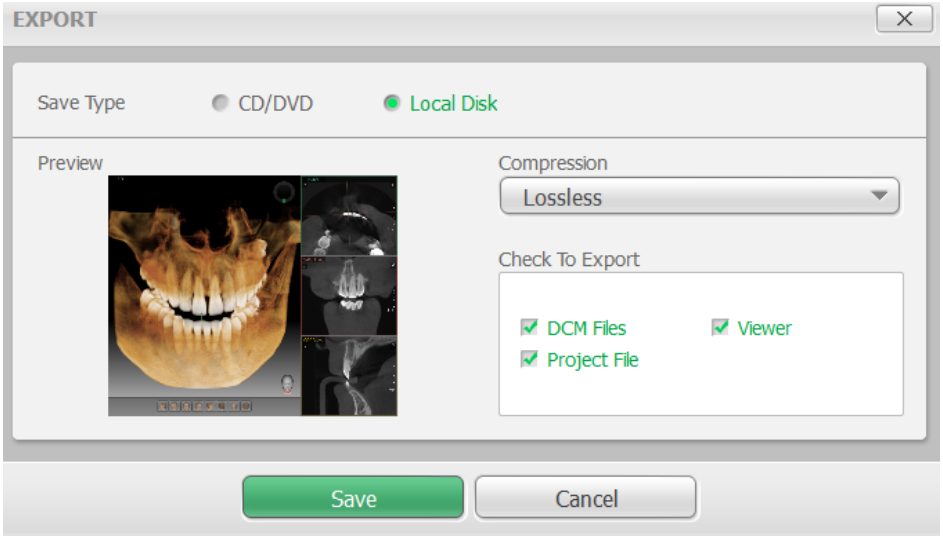



5. After inserting CD/ DVD, select the disc option from Disk Type.
6. Click [Burn] to proceed with CD/ DVD burning.

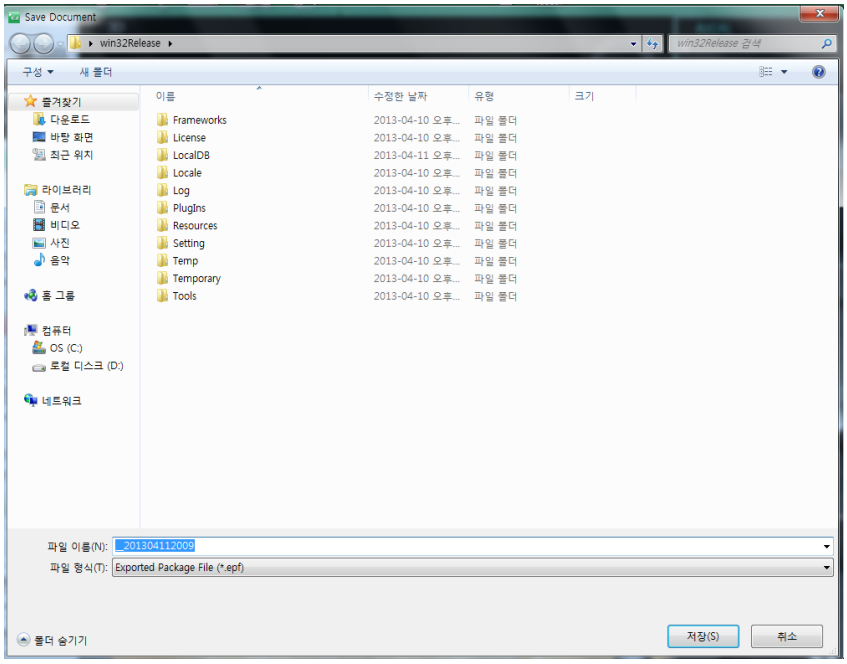
**Information**

Save on the local disk

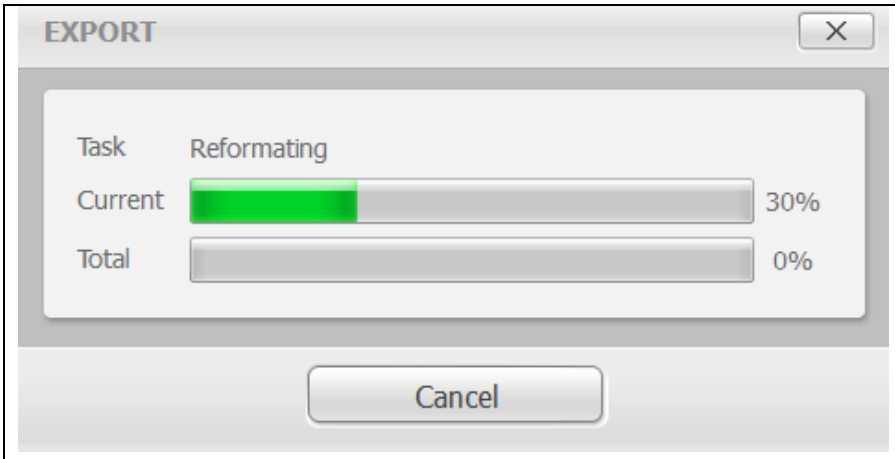
1. Click [Local Disk] to select from Save Type.
2. Click [Save] as follows.



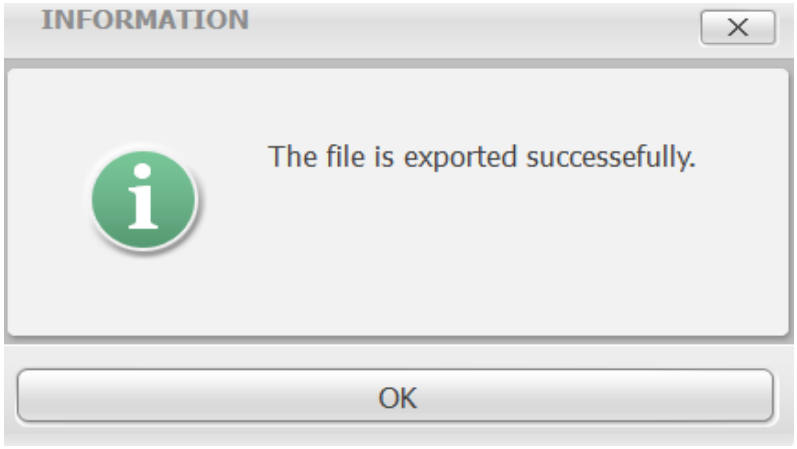

3. The Save Document window appears.




4. Select a location to save, then click the [Save] button.
5. The Export window appears as follows.




6. When the process is complete, the following Information window appears.



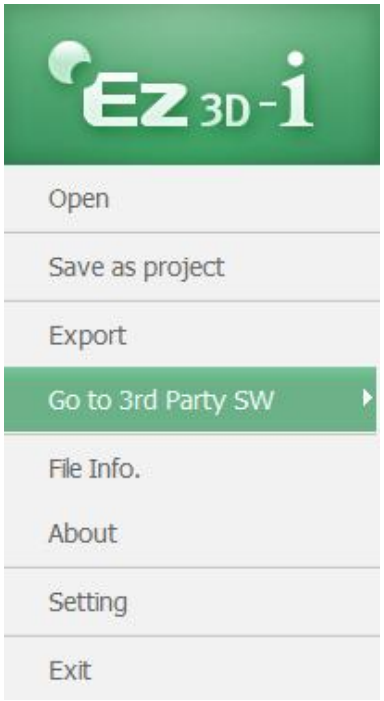

7. Click the [Ok] button to save.

**Exporting to other software**

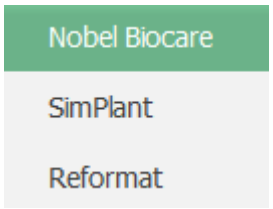
**Note**

Files can be exported to other software such as Nobel Biocare and Simplant.

1. The following list appears when clicking the main button.
2. Click the [Go to 3rd Party SW] button.




3.The following list appears.




4. Click to select the software to be linked.
5. The CT image can be sent to the software selected.

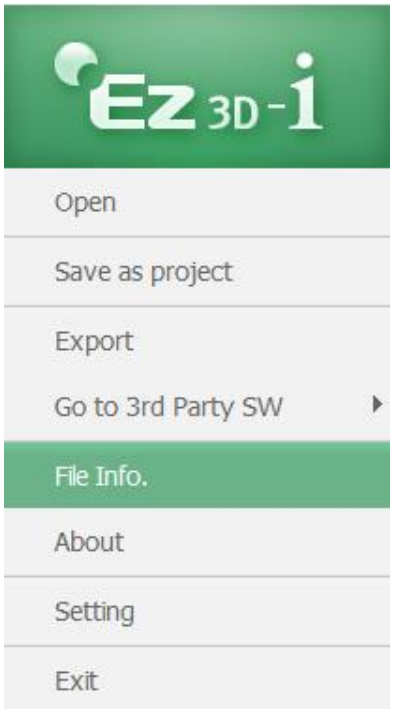
### Reading file information

**Note**

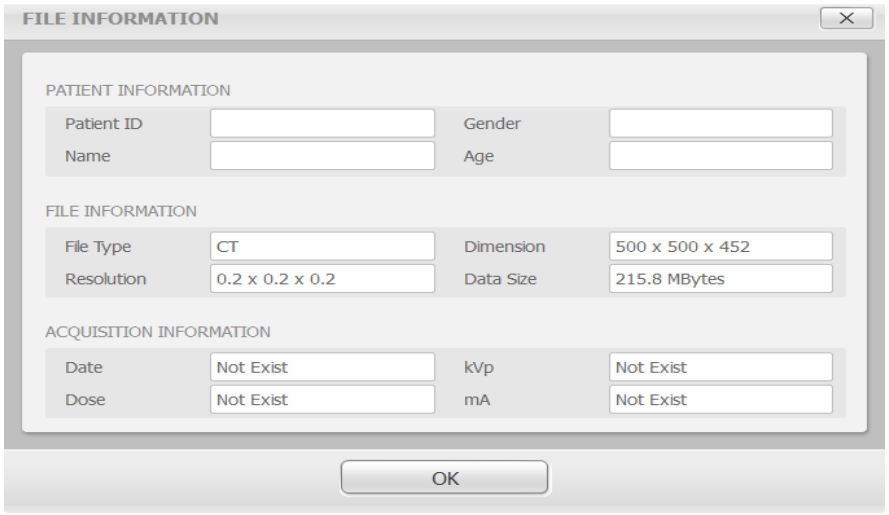
Patient information, file data, and image data of the corresponding file can be obtained.

Patient information contains the patient ID, patient name, gender and age.
File data contains the file type, resolution, data size, and file size.
Image data contains the image acquisition date and the amount of the radiation dosage.

1. The following list appears when the main button is clicked.
2. Click the [File Info] button.




3. The File Information window appears as follows.

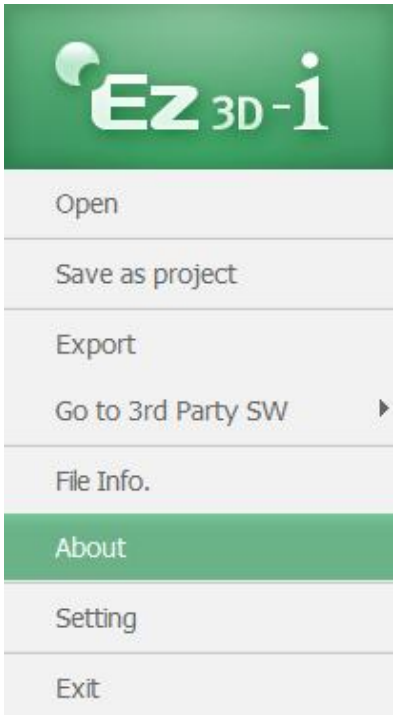


### Ez3D-iProperties

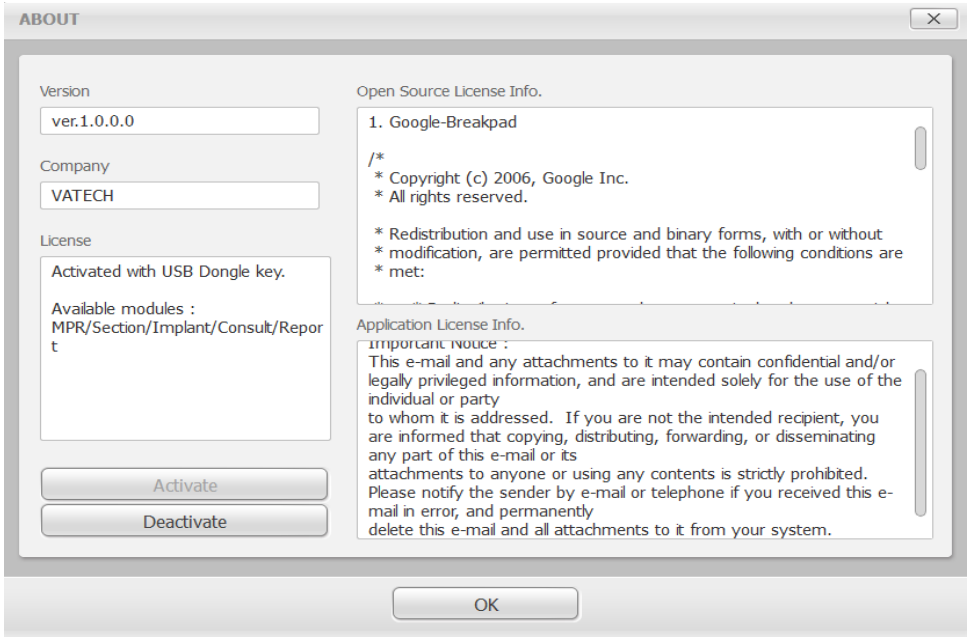
**Note**

The program version, company name, and license information for Ez3D-i are listed.

1. The following list appears when the main button is clicked.
2. Click the [About] button.




3. The About window appears as follows.

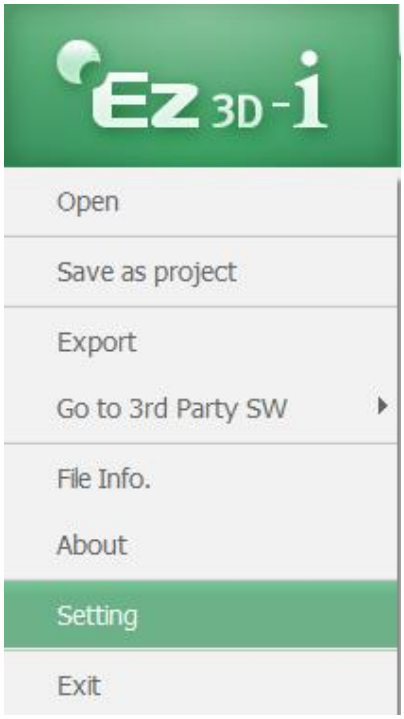

ABOUT
Version
ver.1.0.0.0
Company
VATECH
License
Activated with USB Dongle key.
Available modules :
MPR/Section/Implant/Consult/Report
Activate
Deactivate
Open Source License Info.
1. Google-Breakpad
/*
* Copyright (c) 2006, Google Inc.
* All rights reserved.
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions are
* met:
Application License Info.
Important Notice :
This e-mail and any attachments to it may contain confidential and/or legally privileged information, and are intended solely for the use of the individual or party
to whom it is addressed. If you are not the intended recipient, you are informed that copying, distributing, forwarding, or disseminating any part of this e-mail or its
attachments to anyone or using any contents is strictly prohibited. Please notify the sender by e-mail or telephone if you received this e-mail in error, and permanently
delete this e-mail and all attachments to it from your system.
OK

### Setting properties

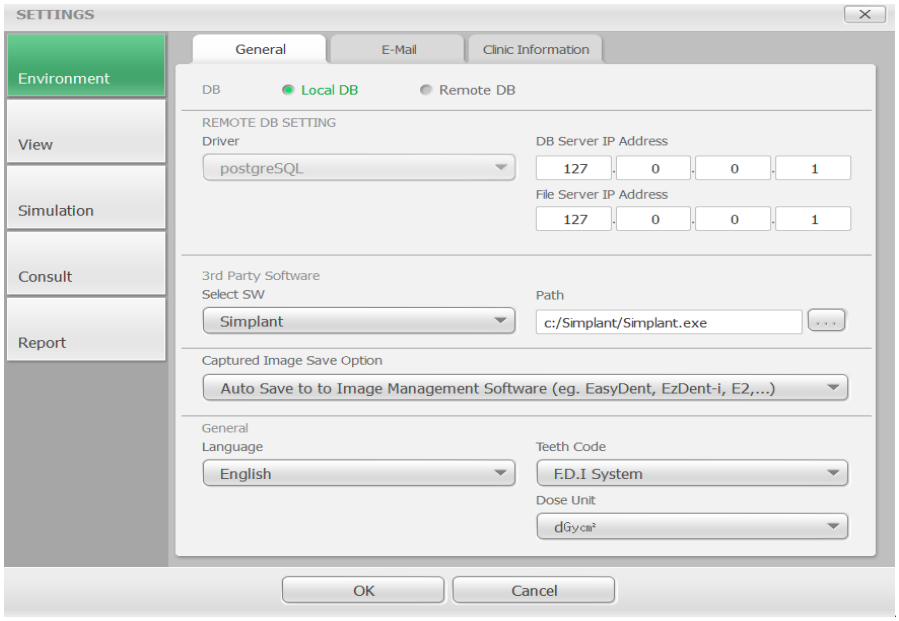
**Note**

It provides the user the general setting preferences necessary for using Ez3D-i.
For details, see '5. Setting'.

1. The following list appears when the main button is clicked.
2. Click the [Setting] button.




3. The Settings window appears as follows.

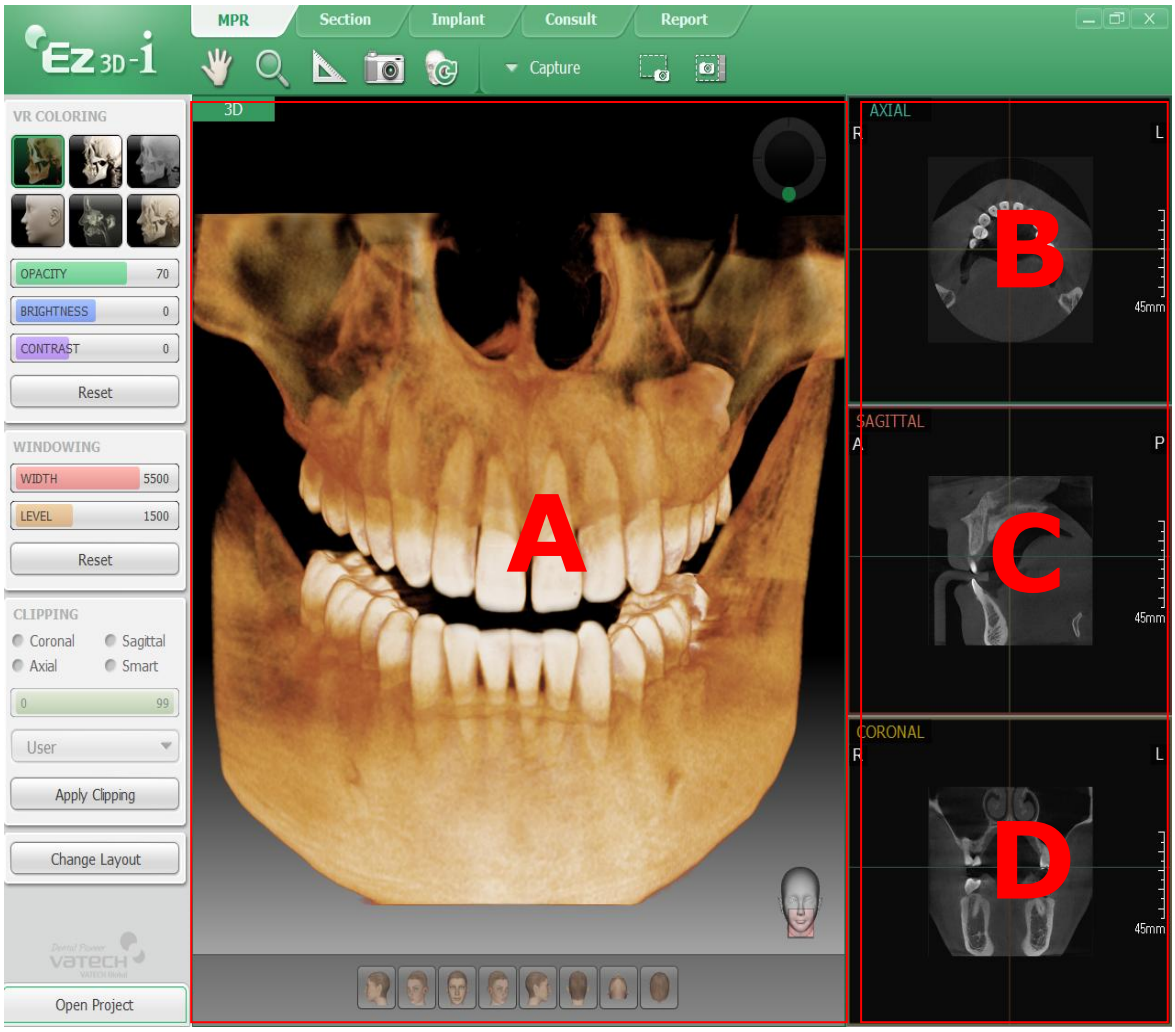


## 4-2. MPR Tab

MPR(Multi Planar Reconstruction) tab provides the cross-sectional area of the image where the user desires to view.
Ez3D-i provides 3D VR(Volume Rendering) images as well as Axial, Sagittal, and Coronalimage, a cross sectional image from the vertical, lateral and frontalpoint of view.

### Guide 1. Configuring and modifying MPR Tab screen

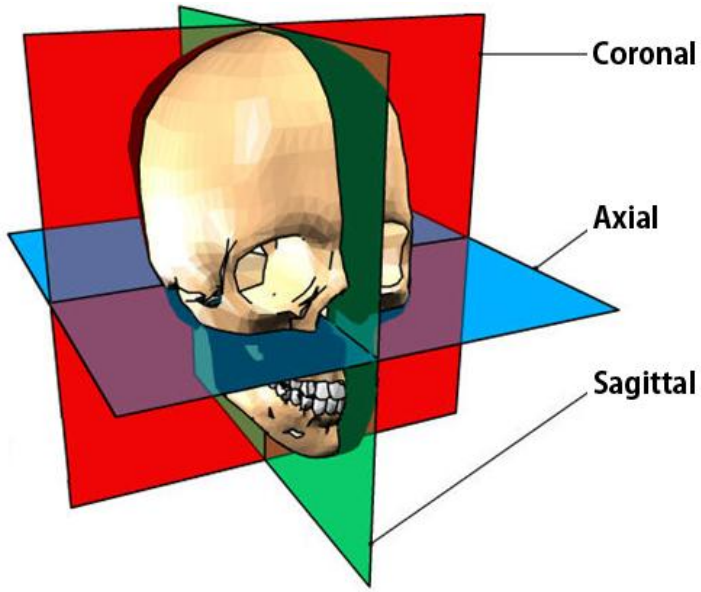
**Workspace properties**



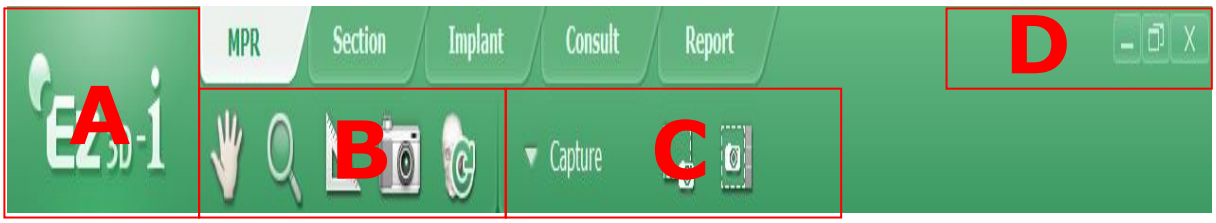

A is the 3D Volume Window screen.
B is the Axial Window screen.
C is the Sagittal Window screen.
D is the Coronal Window screen.

**Tip**

Properties of Axial, Sagittal, Coronal plane



**Menu button properties**



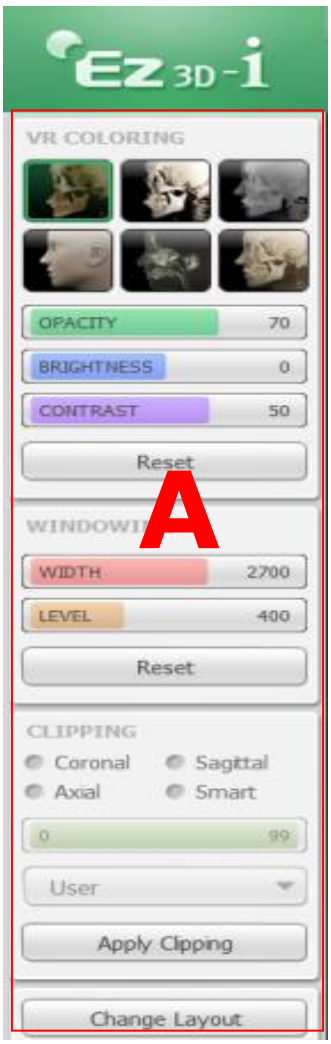

A is the main button. It can load or save a file as well as changing the default settings of the program.

B is the main tool. The main tool is configured the same on all tabs.

C is an expansion tool. The expansion tool is configured differently depending on the tab selected by the user.

D is the window button. It is composed of the minimize, full and close screen buttons.

**Control Panel properties**

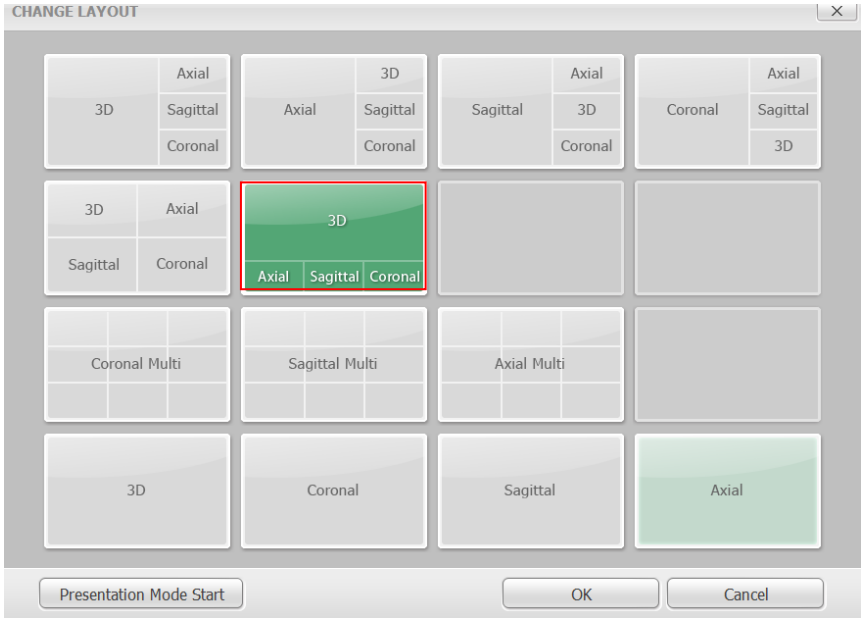



Ais a grouping of the important functions that manipulate the View. It is configured differently depending on the tab selected by the user.

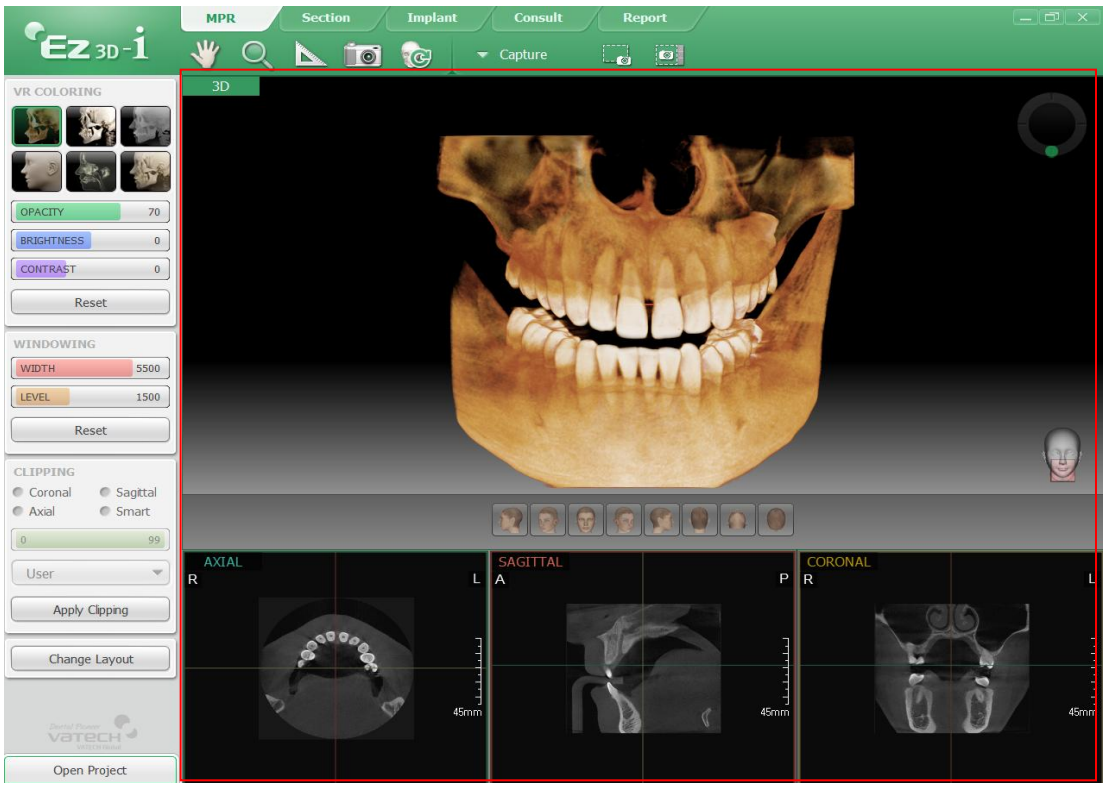
### Changing Layout

The user can change the location and configuration of the images that appear in the Workspace.

1. Click the [Change Layout] button on the bottom left.  TheChange Layout window appears.



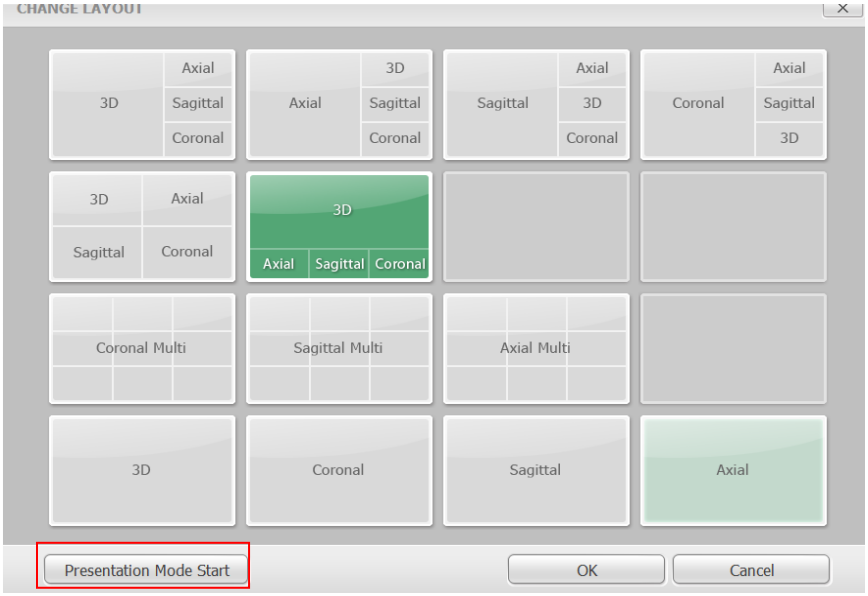

2. Select the desired layout and then click the [Ok] button. The Workspace configuration has changed to the layout selected.

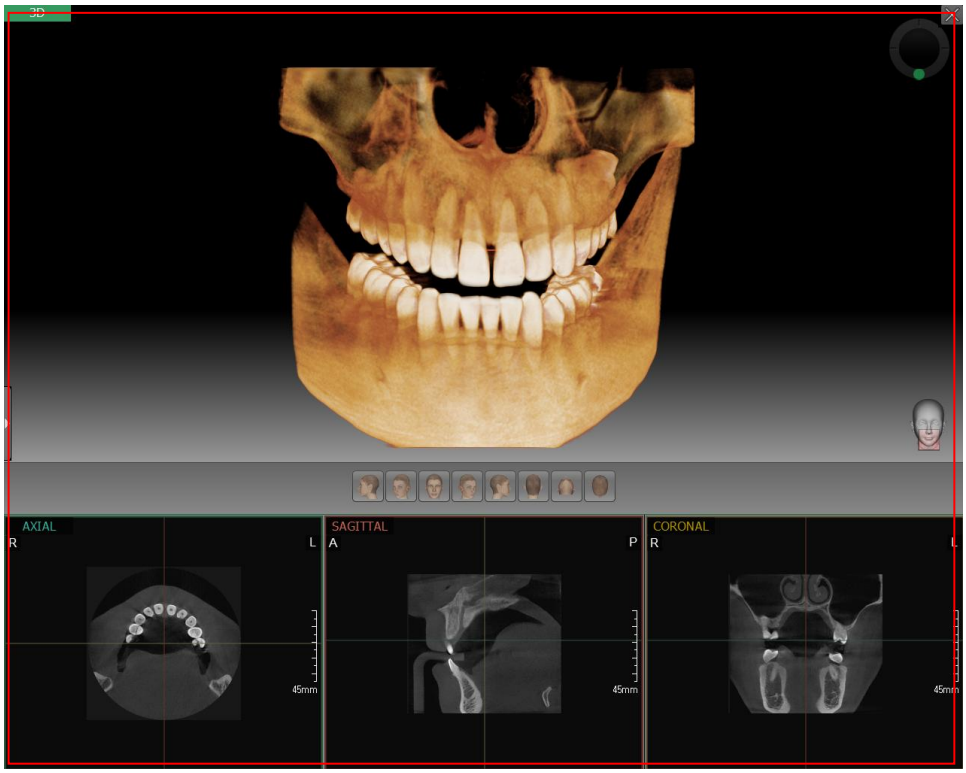


**Swtiching to Full Screen Mode**

3D, Axial, Sagittal, and Coronal images are displayed on one screen.

1. Click the [Change Layout] button. The Change Layoutwindow appears.
2. Click the [Presentation Mode Start] button on the bottom left.The Full Screen Mode window appears.




**>> Full Screen Mode**

**Tip**

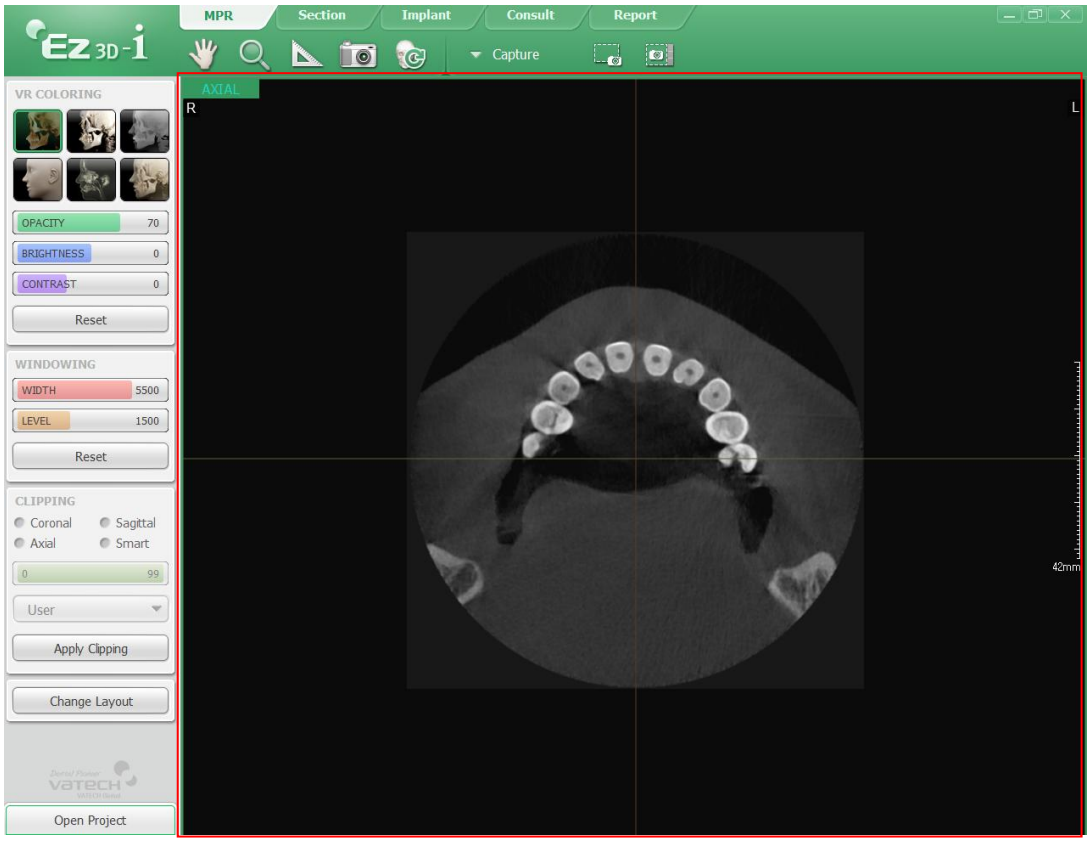
A large image is displayed on the monitor to be utilized during the patient consultation. After selecting an image, change it to Full Screen Mode via the keyboard shortcut [Ctrl]+[Enter].

3. The hidden Tool Bar reappears when the mouse is placed over the arrow on the left.

4. Click the exit button on the upper right hand corner. Full Screen Mode is terminated.

### Switching a 2D image to Full Screen Mode

1. Double-click on the title of the image.  The selected image will switch to Full Screen Mode.




**Tip**

Utilize the [Enter] button on the keyboard.

1. Click the Window Title and press the [Enter] button on the keyboardto maximize the window selected.
2. To return the window to its previous size, press the [Enter] button on the keyboard in the maximized window.

**Tip**

When Axial control is difficult in a split layout, expanding one image type can increase the utilization.

2. Double click the image type in Full Screen Mode to return it to the previous layout.

**Tip**

Show and hide the axis of the 2D image.
Press the [Space] bar from the keyboard on the selected images to hide or show the axes.

### Guide 2. Saving and importing images

Ez3D-i is linked with the 2D image viewer such as EasyDent and EzDent-i.

[Auto Save] when exiting Ez3D-i, the contents is saved automatically.
[Manual Save] The contents can be saved and loaded as a project.

**Note**

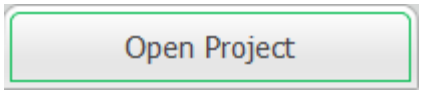
Auto Save, Manual Save

1. The Auto Save feature enables the information to be saved automatically when exiting Ez3D-i.However, an auto savedproject cannot be loaded from the Project list.
2. The Manual Save feature saves the information as a project and loads the information from the Project list.

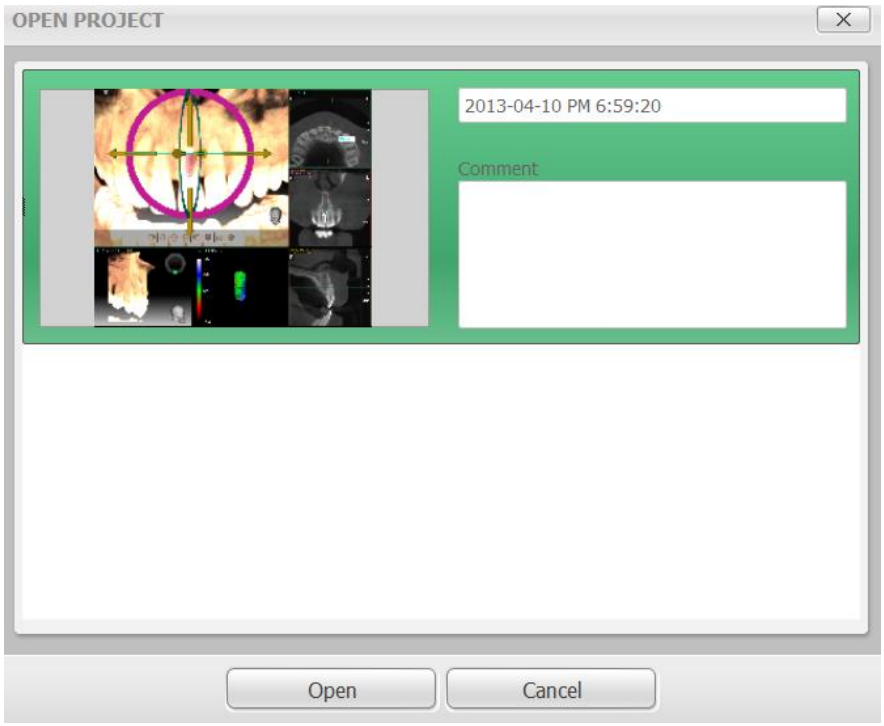
**Importing Project**

Previously edited images (e.g., Annotation, lines, etc.) can be loaded to continue workingon the project.

1. Click the [Open Project] button in the bottom left corner of the screen.



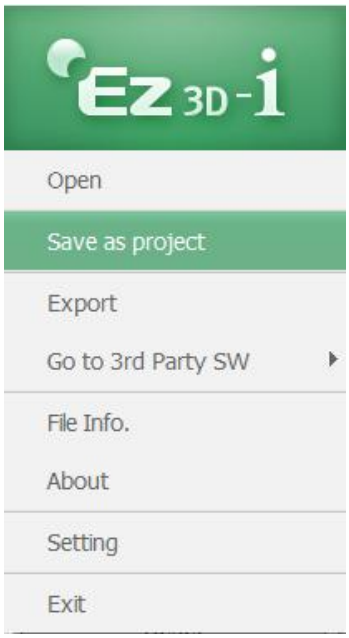

2. The Open Project window appears.



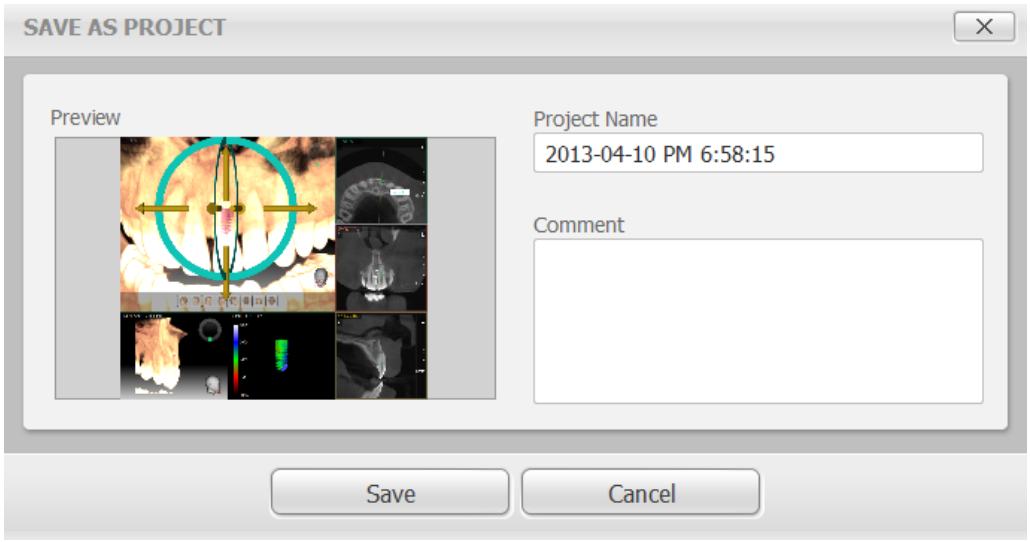

3. Select the item to import from the Project list and click the [Open] button. The selected project appears in the Workspace.

**Saving Project**

1. When the main button is clicked, the following list appears.




2. When the [Save As Project] button is clicked, theSave as Projectwindow appears as follows.




3. Enter comments in the Comment field and click the [Save] button.
4.Click the main button. Select the [Open Project] and verify the saved Project from the Open Project window appeared.

### Guide 3. Controlling the direction of 3D, VR images

Ez3D-i provides three ways to adjust the direction of a3D image which can be chosen to suit the user's convenience.

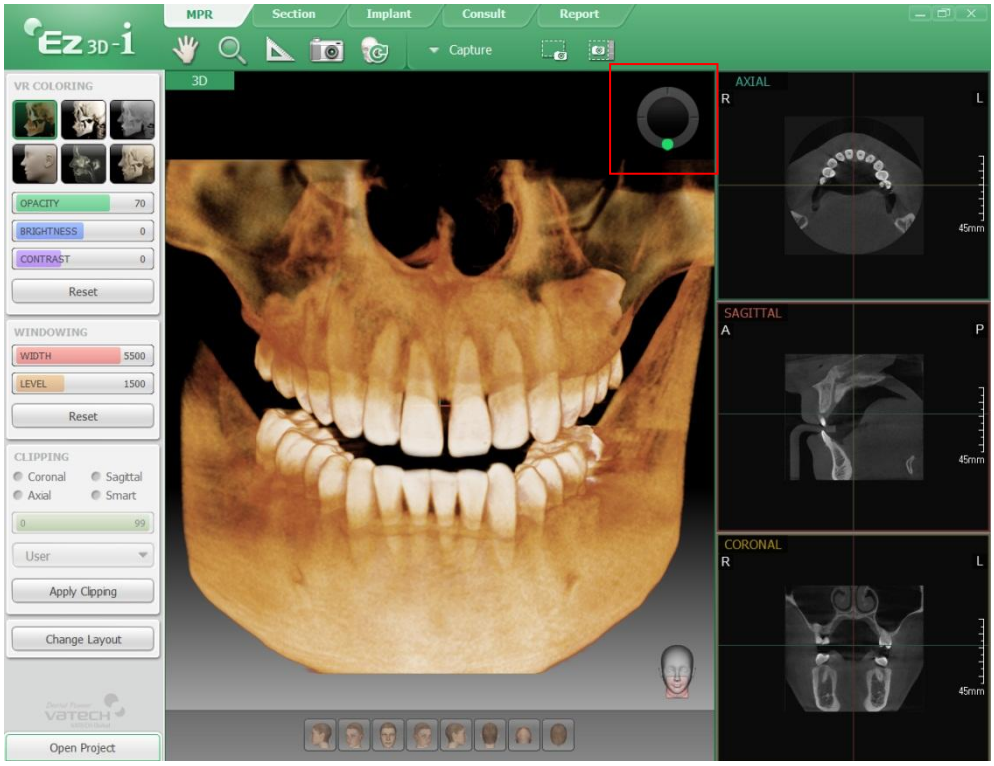
#### Using 3D View Rotator

1. Adjust the blue circle of the 3D View Rotator located on the right side of the 3D image. The 3D image is rotated 360 degrees.

**Tip**

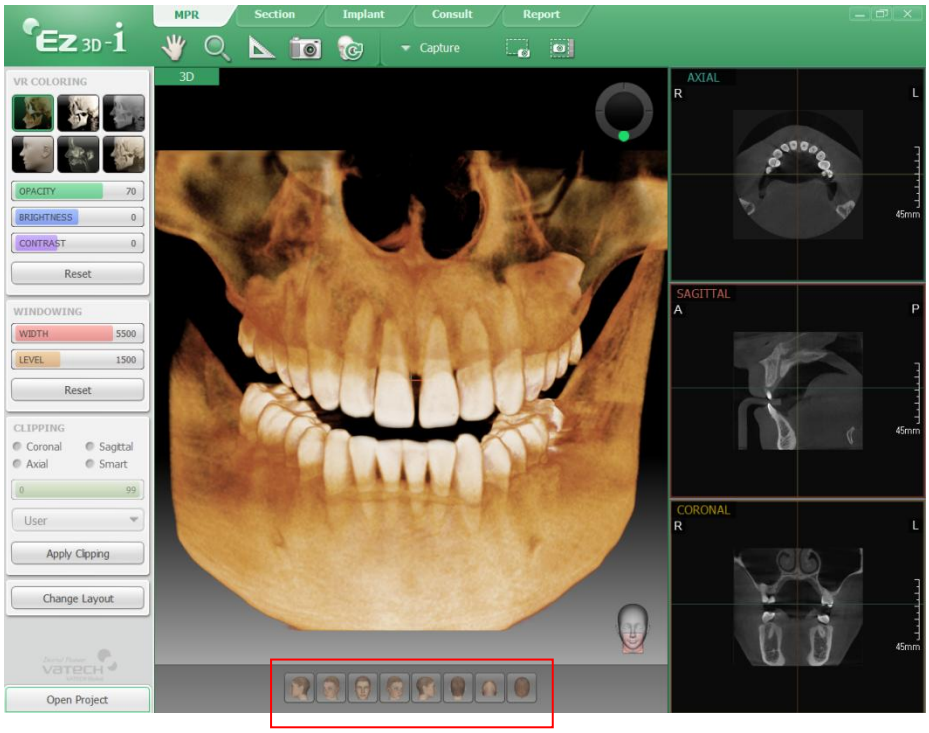
Use the mouse wheel.

The mouse wheel can adjust the blue circle in the 3D View Rotator.



### Using Predefined View Buttons

1. When clicking the head image button at the bottom of the 3D realm, the 3D image is displayed as the location indicated.



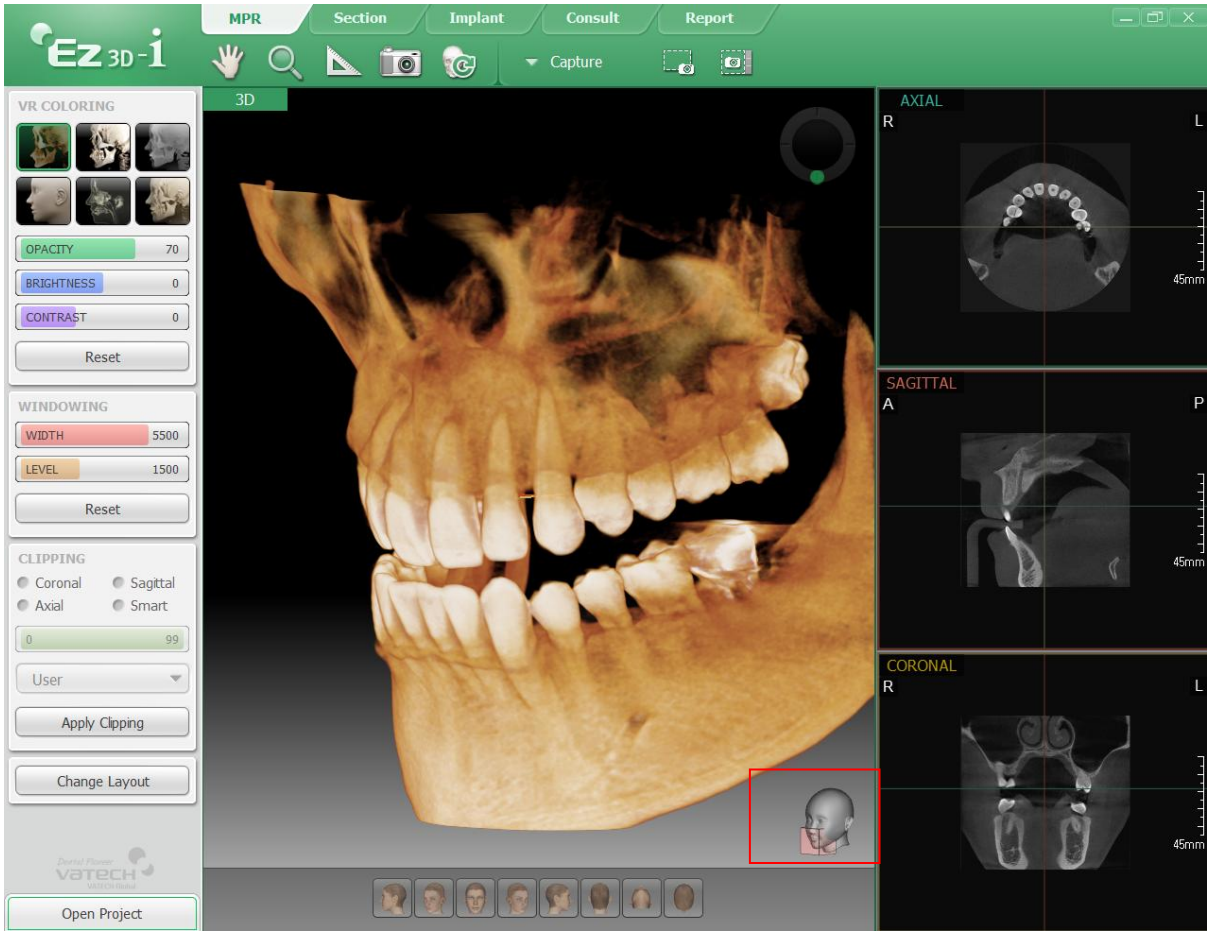
### Using View Skull/Cube

**Note**

**View SkullPink Box**

It indicates the 3D capture area in relation to the entire view of the skull.
It appears when the DICOM header file is existed.

1. Control the direction of the3D image, by clicking and dragging the skull or the cubein the same direction as the 3D image.



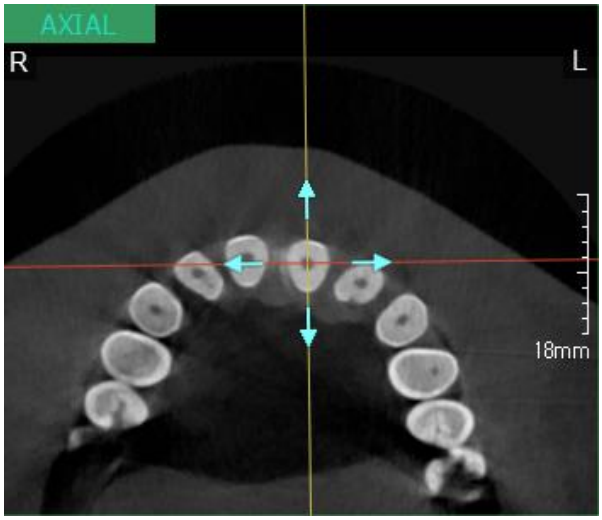
### Guide 4. 2D Adjusting the axis of the image

**Note**

From a 2D image, the user can adjust the axial view of the selected tooth. The user can check the structure of the surrounding teeth by using the mouse wheel.

#### Adjusting two axes simultaneously

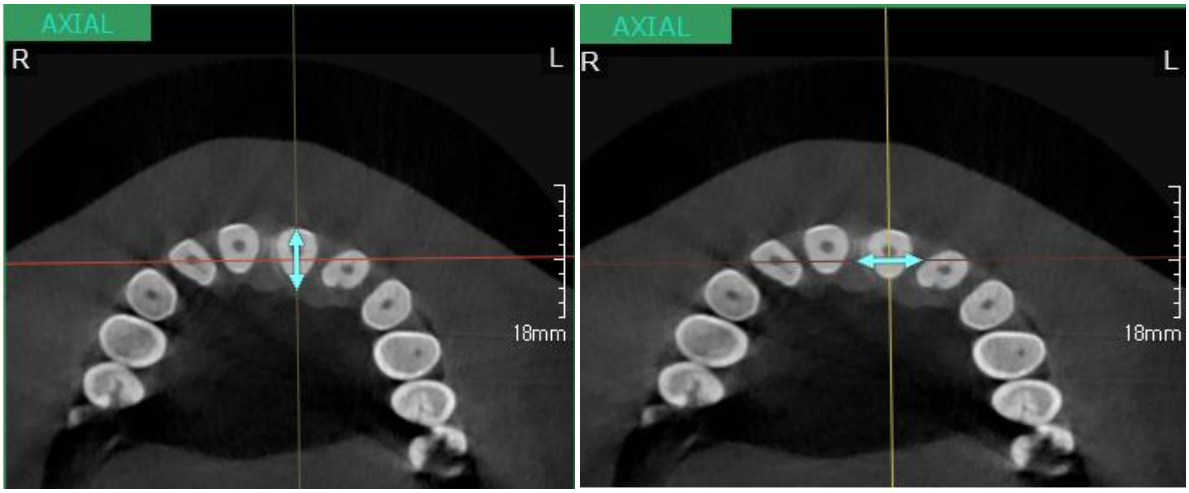
1. Hover the mouse to the point where two axes intersect, the cross cursor shape appears.




2. Click and drag to move the two axes of the tooth selected.

**Adjusting one axis**

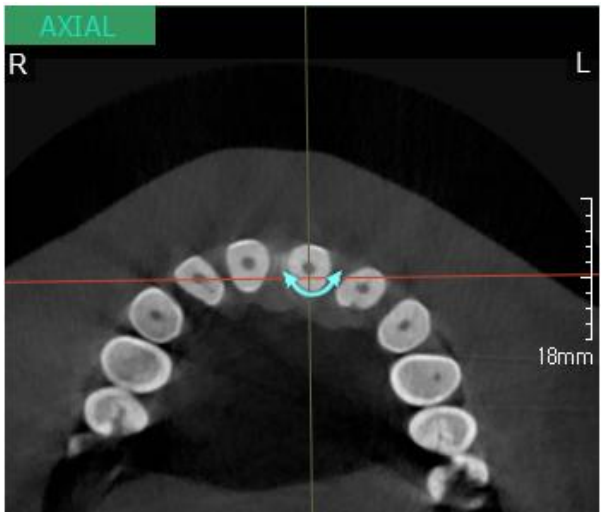
1.Hover the mouse on one axis and the arrow shape cursor or appears.




2. Click and drag to move the axis of the selected tooth.

**Rotating the axis**

1.Hover the mouse on an end point of the axes and the arrow cursor appears.



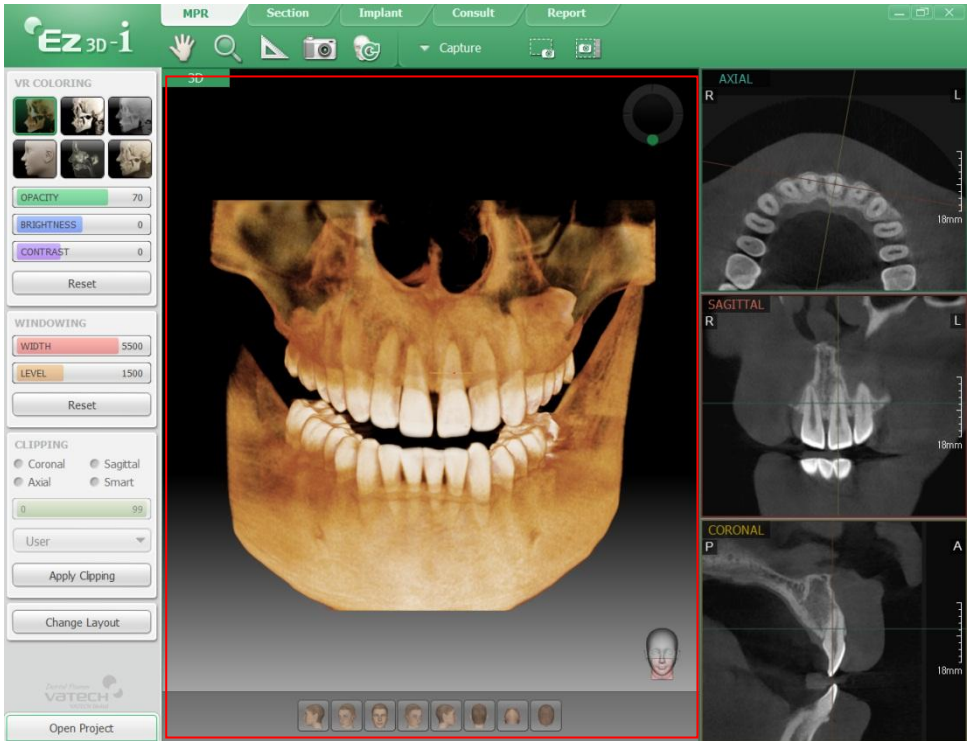

2. Click and drag to adjust the axial direction of the selected tooth.

### Guide 5. Utilizing Smart Click for 3D image

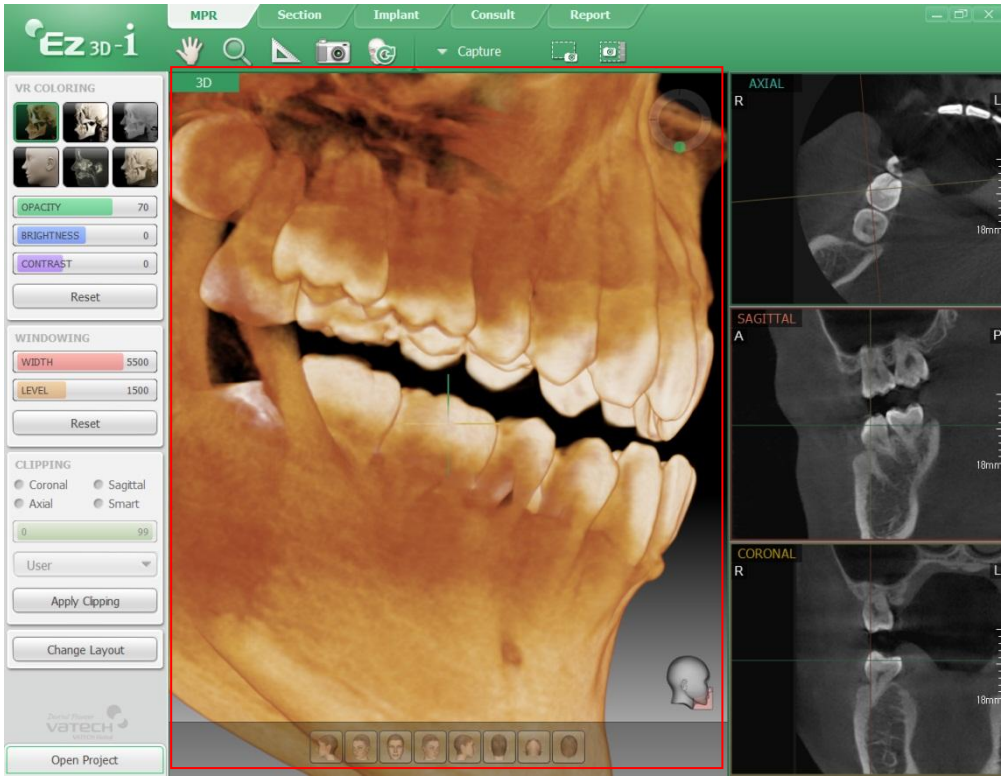
**Note**

Double click an area of the 3D image to magnify the image details.
Corresponding movements of Axial, Sagittal, and Coronal images appear on the screen.

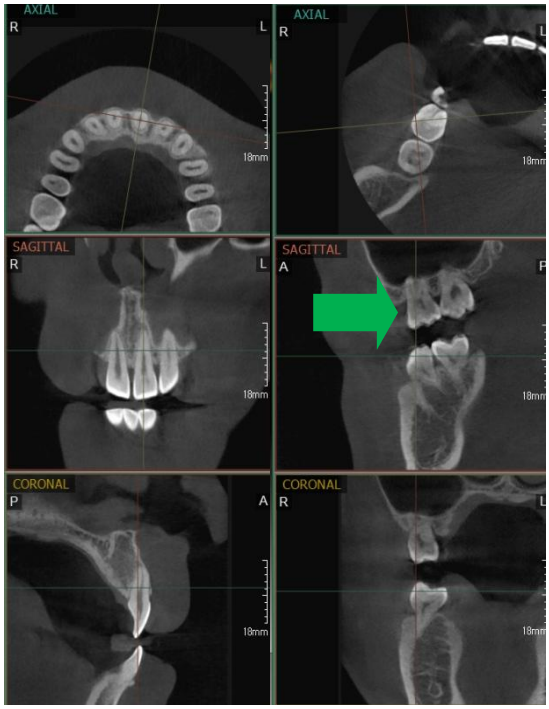
1.Double click on the part of the 3D image that the user wishes to view.



2. The 3D image surrounding the point of double clicking is enlarged.




3. The corresponding view of Axial, Sagittal, and Coronal images appears according to the movement of 3D images.



### Guide 6.Changing the 3Drendering mode

#### VR Coloring

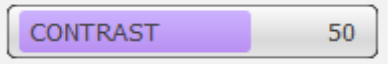
**Note**

The image viewing is optimized with the rendering value that the user has chosen.

The value of rendering can be changed forTooth, Bone, MIP, Soft Tissue, Soft Tissue 2,and Soft Tissue+Bone.

After applying the rendering value, the transparency, brightness and contrast of the image can be adjusted by moving the slider to the left or right.

**Main Tools**

| Icons | Designation | Description of Functions |
|---|---|---|
| | Tooth | Tooth mode view |
| | Bone | Bone mode view |
| | MIP | MIP mode view |
| | Soft Tissue | Soft Tissue mode view |
| | Soft Tissue 2 | View Soft Tissue with low transparency |
| | Soft Tissue +Bone | Soft tissue + bone mode view |
| | Opacity | Adjust the transparency of the image |
| | Brightness | Adjust the brightness of the image |
|  | Contrast | Adjust the contract of the image |
| | Reset | Initialize the value |

### Guide 7. Adjusting2D images

#### Windowing

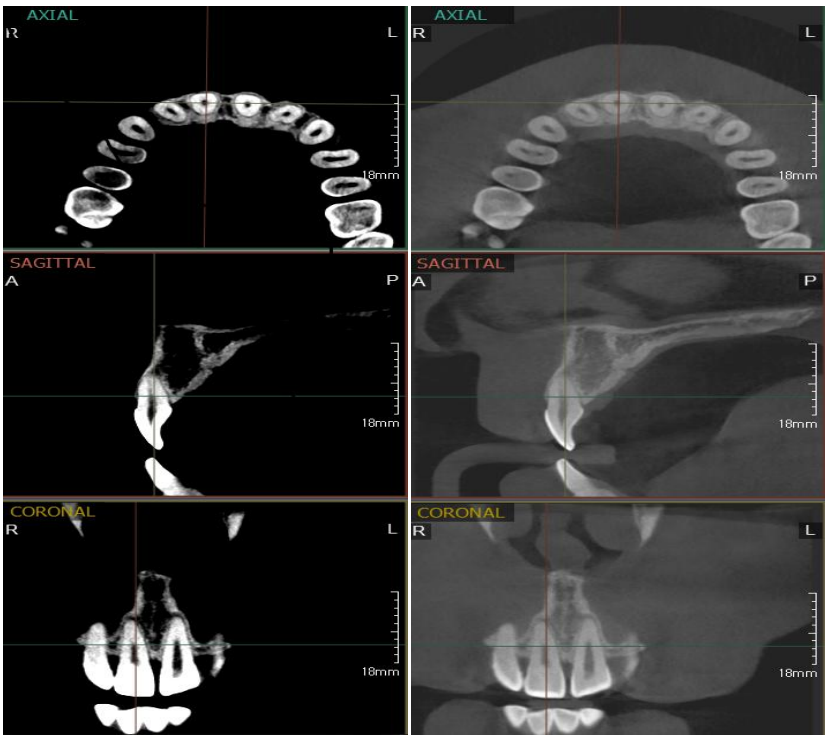
| **Note** |
| --- |
| By adjusting the brightness and contrast levels of a 2D image, the user can optimize the image viewing. |

1. To adjust the brightness and contrast of the 2D image, move the slider to the left or right.
2. Or click the right mouse button on the image and drag to manipulate the brightness and contrast value.

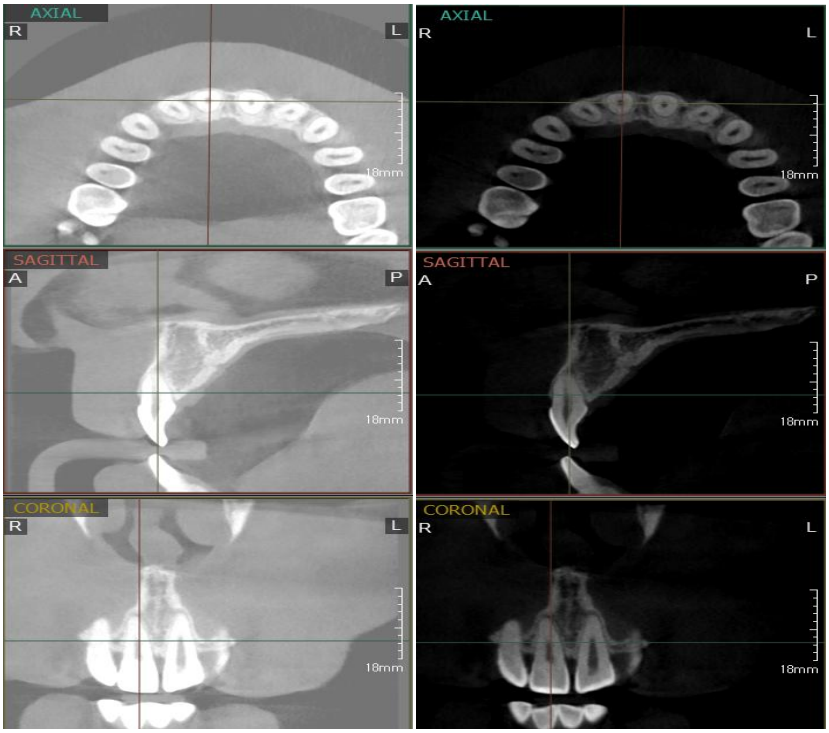
#### Image Icons

| Icons | Designation | Description of Functions |
| --- | --- | --- |
| | Width | Adjust the brightness of the image |
| | Level | Adjust the contrast of the image |
| | Reset | Initialize the image value |

**>>Comparison of the 2D image brightness [Width]**




**>>Comparison of 2D image contrast [Level]**



### Guide 8.Using Clipping

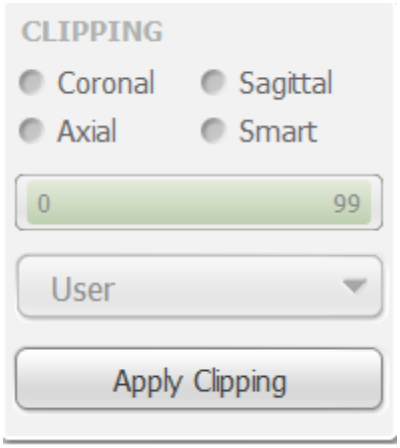
**Note**

Clipping cuts a 3D image in an axial direction and shows the cross sectional view of the3D image.

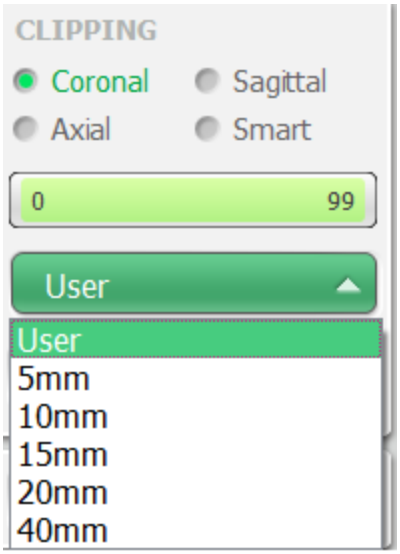
Clipping function can be done by using the slider bar or a user can set the thickness and position of the image slice.

#### Clipping by specifying the position

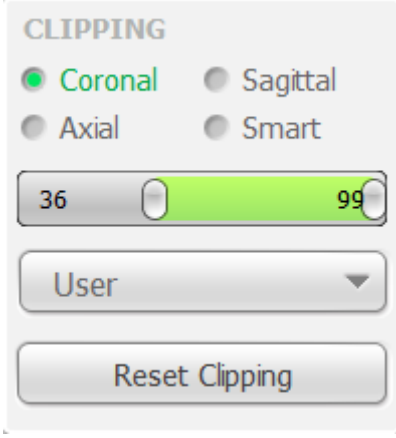
1. Select the axis of the ball by deleting the volume of the 3D images on the clipping window.



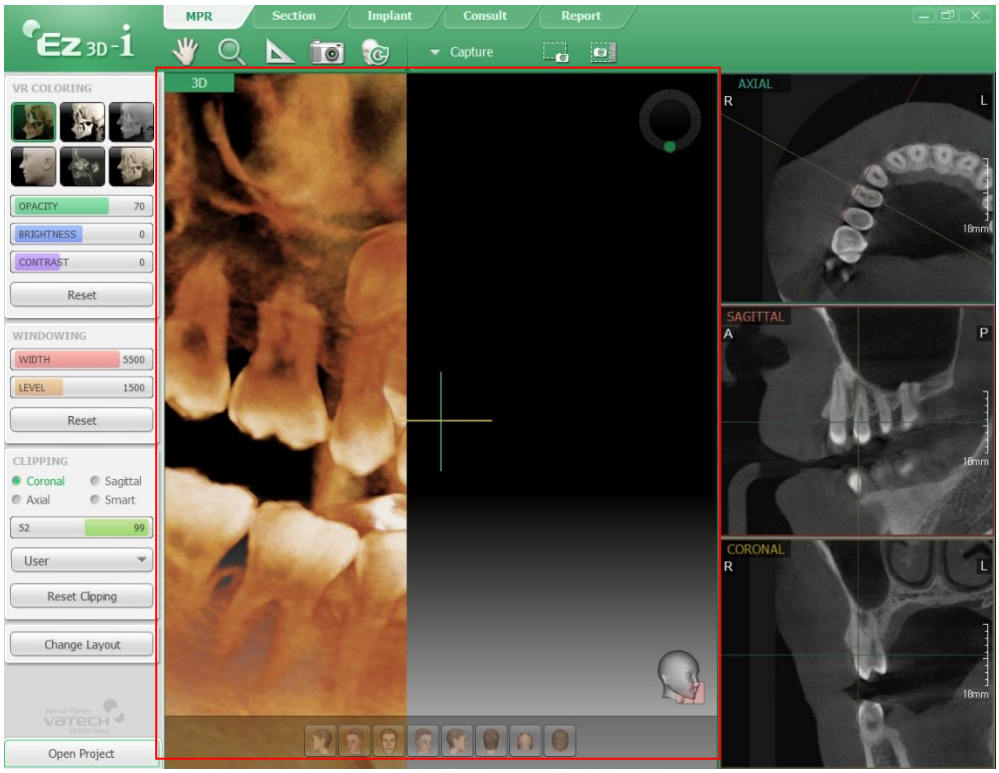

2. Click [User] from the Clipping Combo box.



3. Slide the bar to the left and right to clip the image in the direction of the corresponding axis.




4. The 3D image cut is displayed as follows.

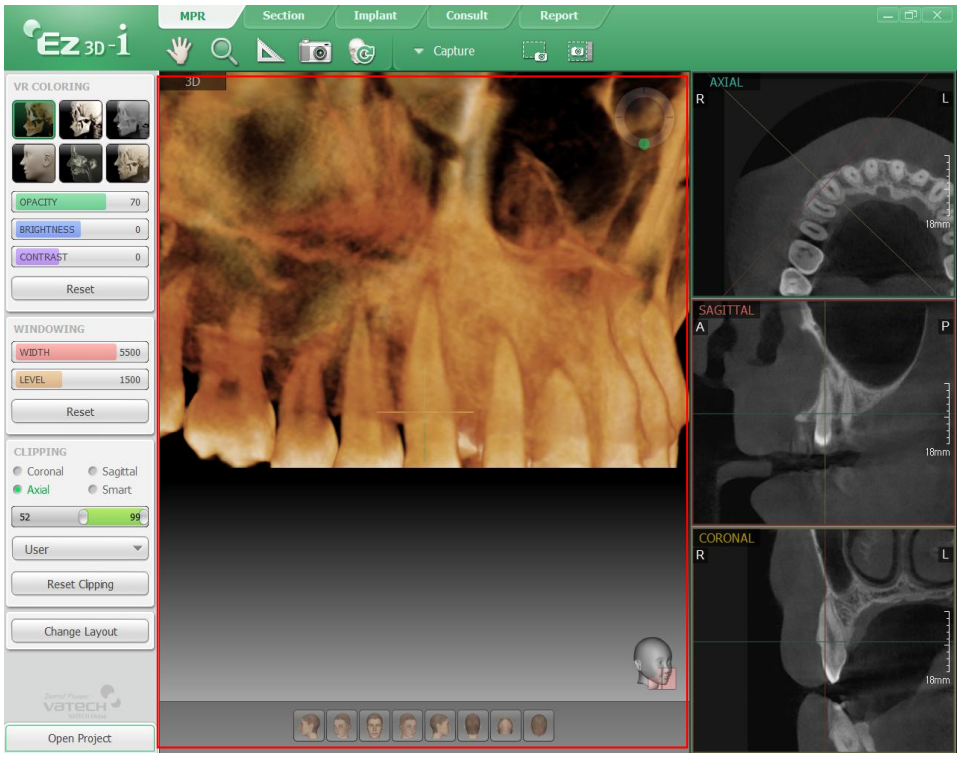



5. Click the Reset Clipping to reset the image to the original condition.

**Information**

Cut the 3D image from other axes.

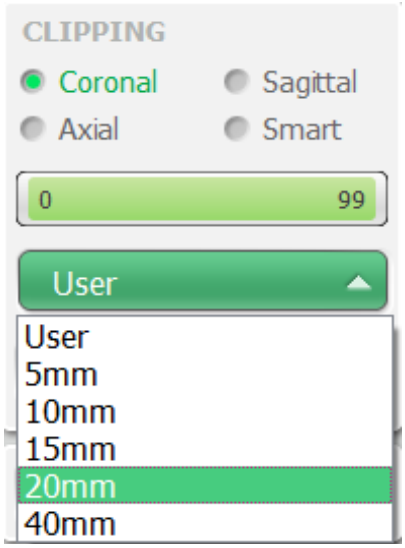
**>>3D image cut around theSagittal axis**



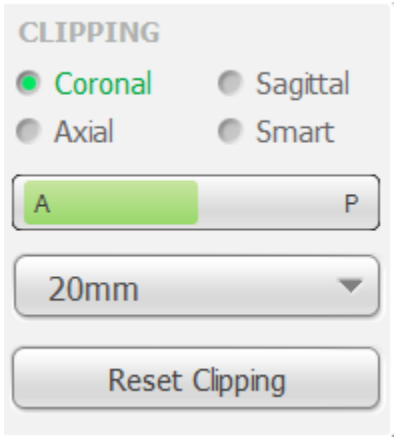

**>>3D image cut around the Axial axis**

**Clipping by choosing the thickness**

1. Click the box for the slice thickness selection.

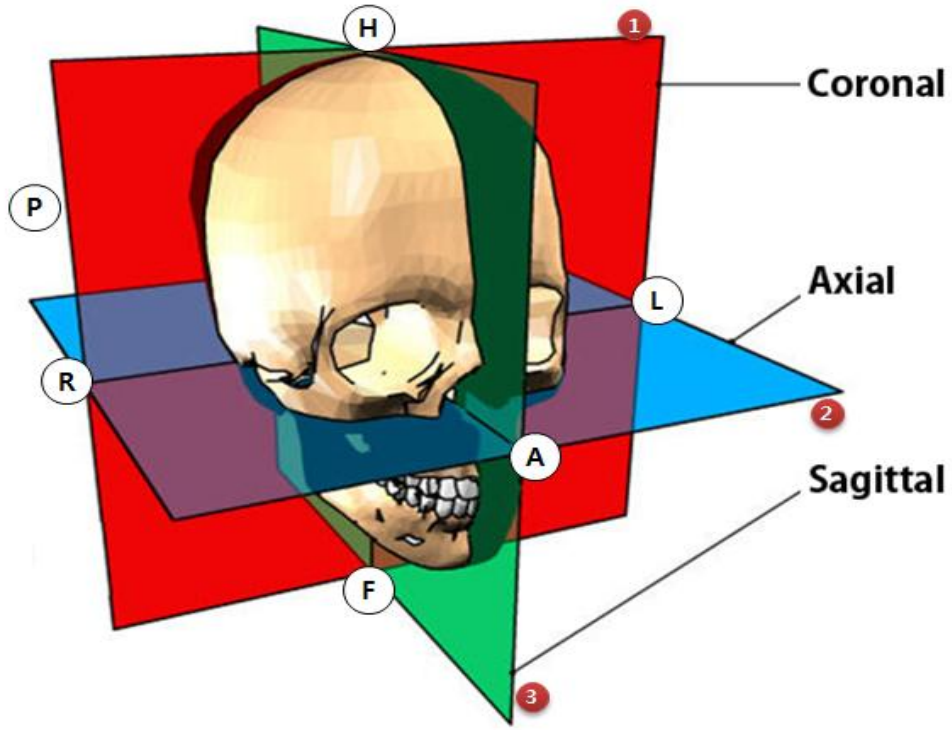



2. After selecting the size of the thickness, control the location and thickness of clipping with the slider bar.



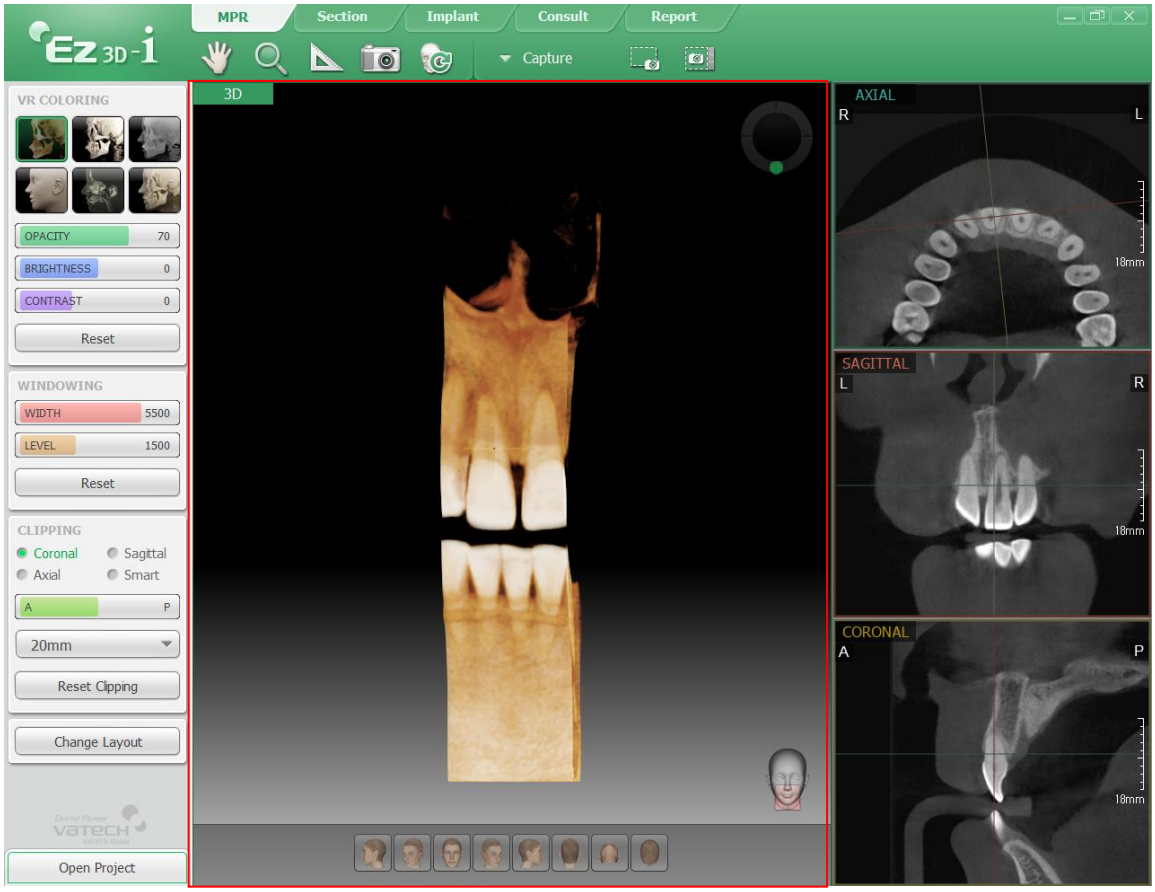
**Tip**

The slider bar setting in the direction of the corresponding axis.




When the coronal axis is selected, the slider bar setting is changed to A→P.
When the axial axis is selected, the slider bar setting is changed to F→H.
When the sagittal axis is selected, the slider bar setting is changed to L→R.

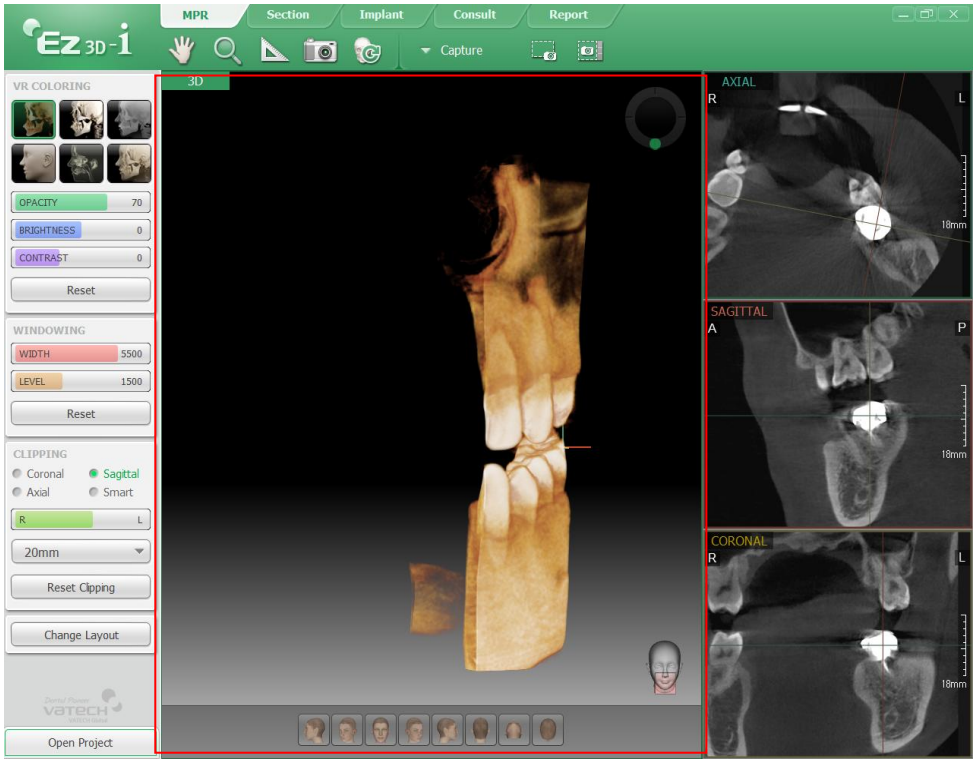
3. The 3D image is chopped as shown in the following screen.



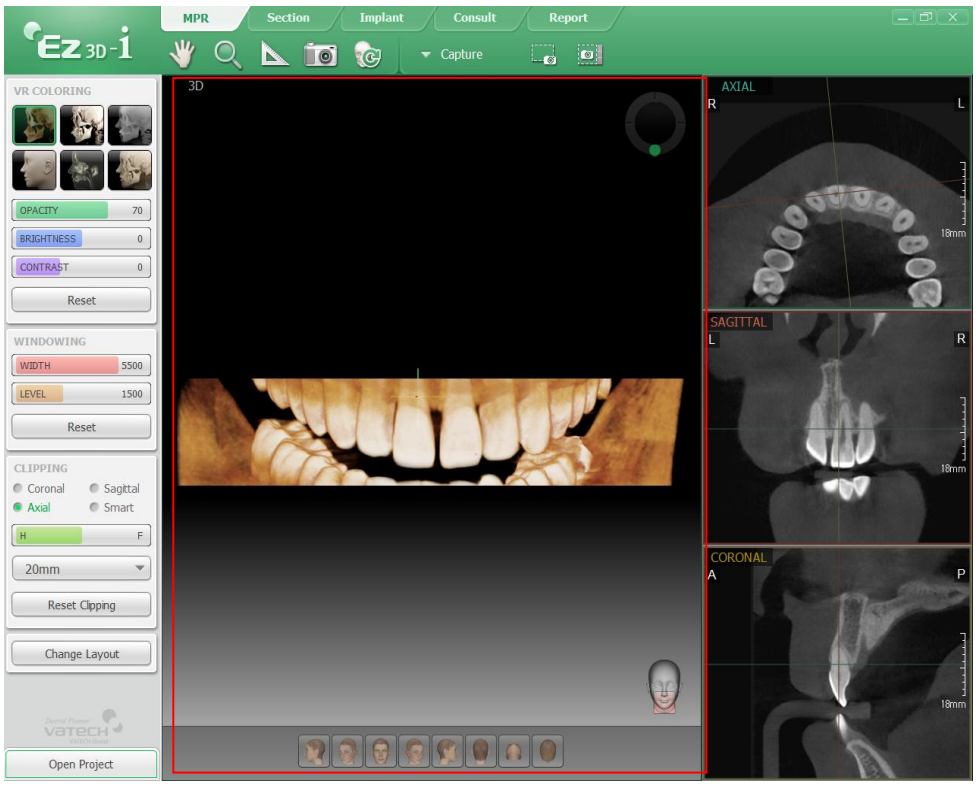

4. Click Reset Clipping to return to the original image.

**Information**

Cut the 3D image around different axis.



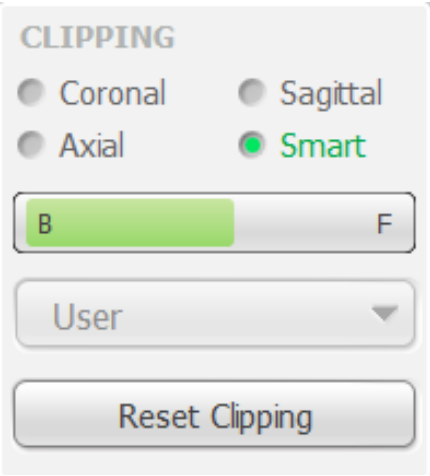

**>>3D image cut around the Sagittal axis (20mm)**



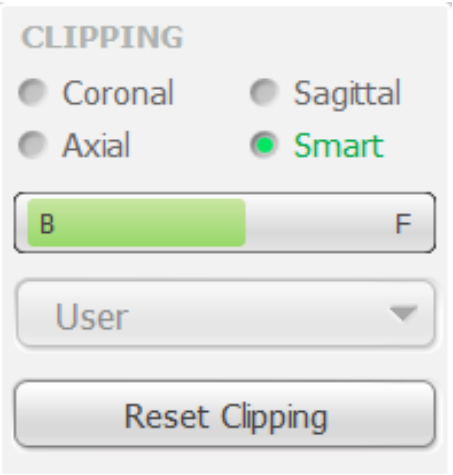

**>>3D image cut around the Axial axis (20mm)**

**Smart Clipping**

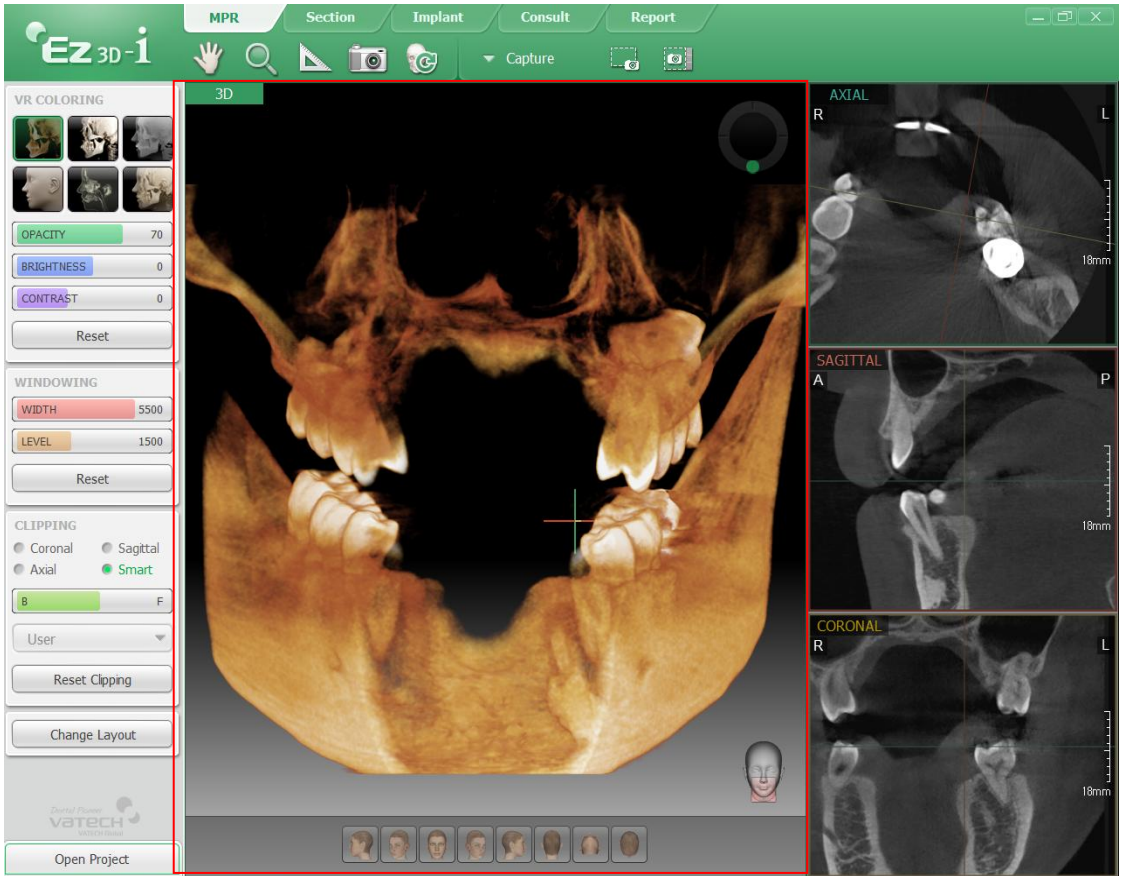
1. Click Smart Clipping in the box as follows.




2. Control the location of clipping on the slider bar.

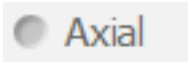
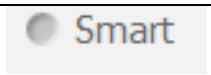
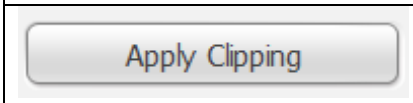
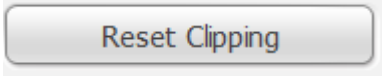


3. 3D image clipping is shown in the following screen.




4. Click Reset Clipping to return to the original image.

**Image icons**

| Icons | Designation | Description of Functions |
|---|---|---|
| | Coronal Clipping | Crop image front and back around the Coronal axis. |
| | Sagittal Clipping | Crop image front and back around the Sagittal axis. |
|  | Axial Clipping | Crop image front and back around the Axial axis. |
|  | Smart Clipping | Crop image front and back around the Z axis. |
| | Clipping Slider | Set the area to crop. |
| | Clipping Combo box | Set the thickness to delete the image volume. |
|  | Apply Clipping | Apply clipping. |
|  | Reset Clipping | Reset Clipping |

**Tip**

Apply Clippingbutton, before applying, turns to Reset Clipping button after clipping.

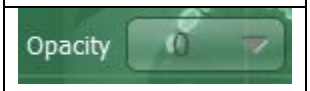
Guide 9.Tools in the Tool Bar

**Main tools**

| Icons | Designation | Description of Features |
|---|---|---|
| | Panning | Move images |
| | Zooming | Magnify images |
| | Measure Length | Measure the distance between two points on the 2D image |
| | Capture View Frame | Capture the View Frame area |
| | Reset View | Initialize rotate, move, zoom |

**Advanced tools**

| Icons | Designation | | Description of Features |
|---|---|---|---|
| | Capture | Capture Region | Capture the area selected |
| | | Capture Window | Capture the View Window area |
| | Measurement | Measure Angle | Measure the angle between three points |
| | | Profile | Density Profile between two points |
| | | Measure Volume | Measure the volume of the threshold area from the selected area. |
| | Annotation | Freedraw | Free draw |
| | | Memo | Memo |
| | Sculpt | Sculpt | View the selected area separately |
| | | Invert | Invert the Sculpt view area |
| | | Undo | Go to the previous step |

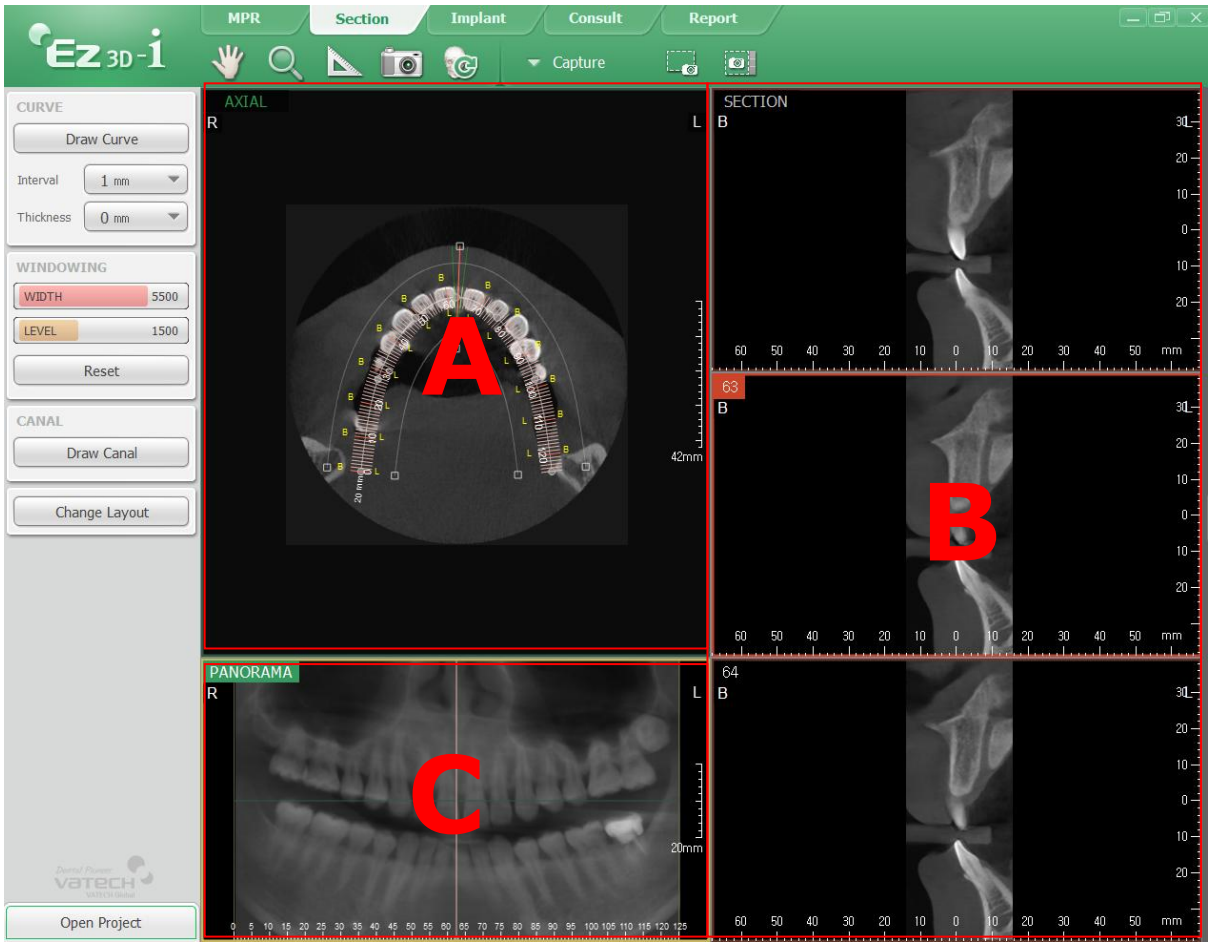
| | | | |
|---|---|---|---|
| | | Redo | Revert Undo |
| | | Reset | Reset Sculpt |
|   | | Opacity | Adjust the transparency of the Sculpt area |
| | Reset/ Object | Turn On/Off Overlay | Show / Hide all input objects |
| | | Show Manager | Show / Hide individual input object |
| | | Initialize | Initialize all changes |

## 4-3. Section Tab

The Section Tab is provided so that the user can examine the clinical structure of an image.
Ez3D-i capabilities includeAxial View, Panorama View, Section View,arch drawing, and mandibular nerve drawing.

### Guide 1. Configuring and modifying Section Tab Screen

**Workspace properties**

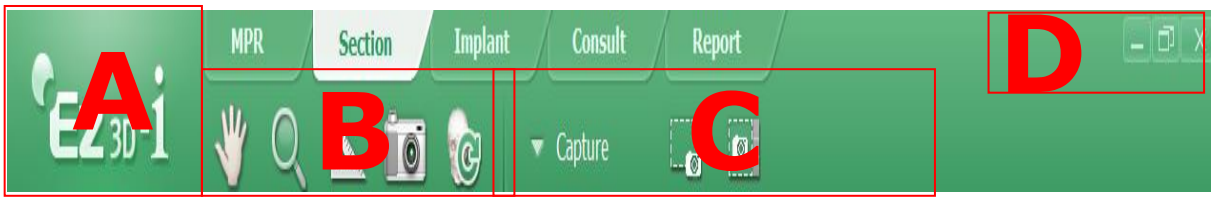



A is Axial Window screen. The information about the arch can be examined. Clickthe [Draw Curve]button to draw a curve along the arch.

B is Section Window screen.The information about a specific area of the image can be examined closely. Click the [Draw Canal] button to draw the canal along the mandibular nerve.

C is Panorama Window screen.The information about the image of the mandibular nerve can be examined. Click the [Draw Canal] button to draw the canal along the mandibular nerve.

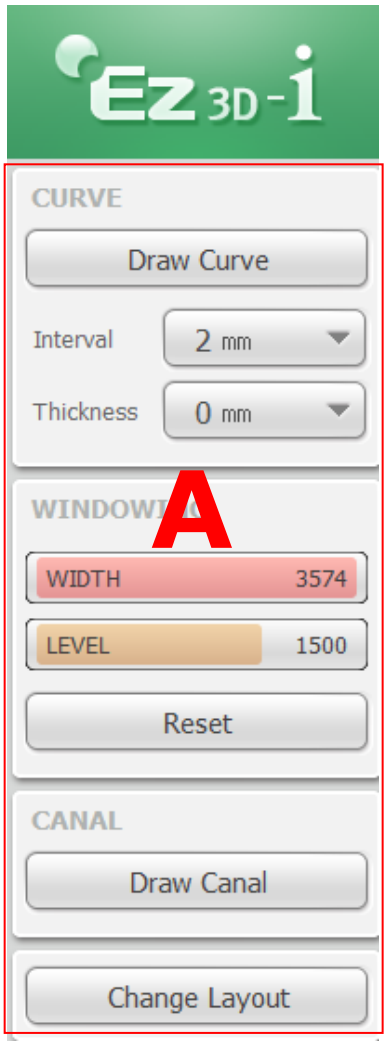
**The menu button properties**




**Note**

Refer to 4-2➔ Guide 1➔'Menu button properties'.

**Control Panel properties**




**Note**

Refer to 4-2➔ Guide 1➔'Control Panel properties'.

**Changing Layout**

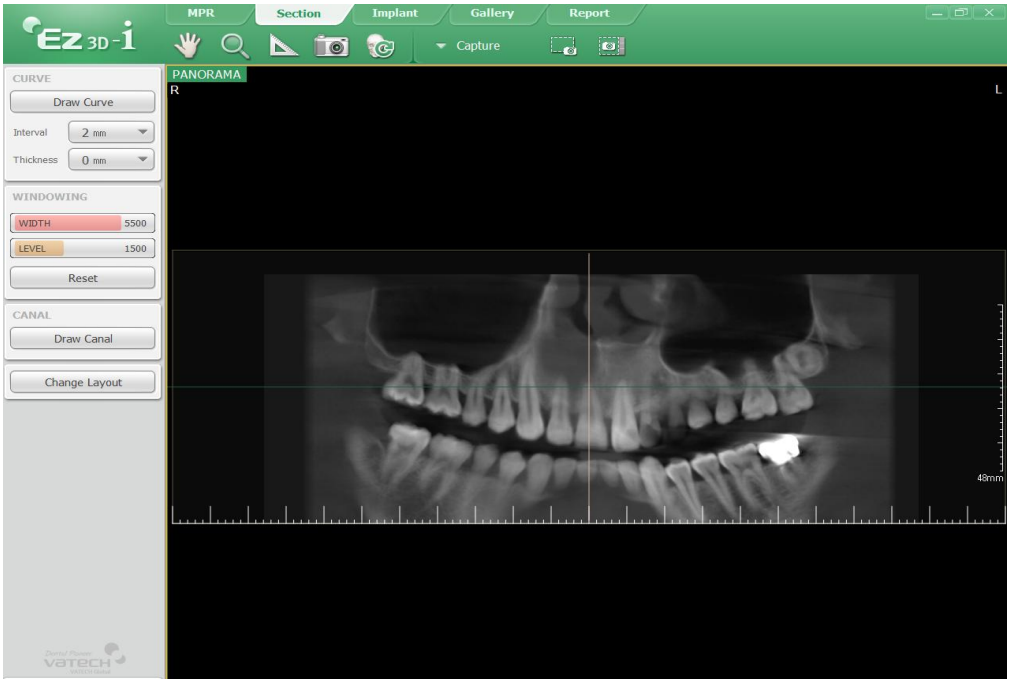
**Note**

Refer to 4-2➔ Guide 1➔'Changing Layout'.

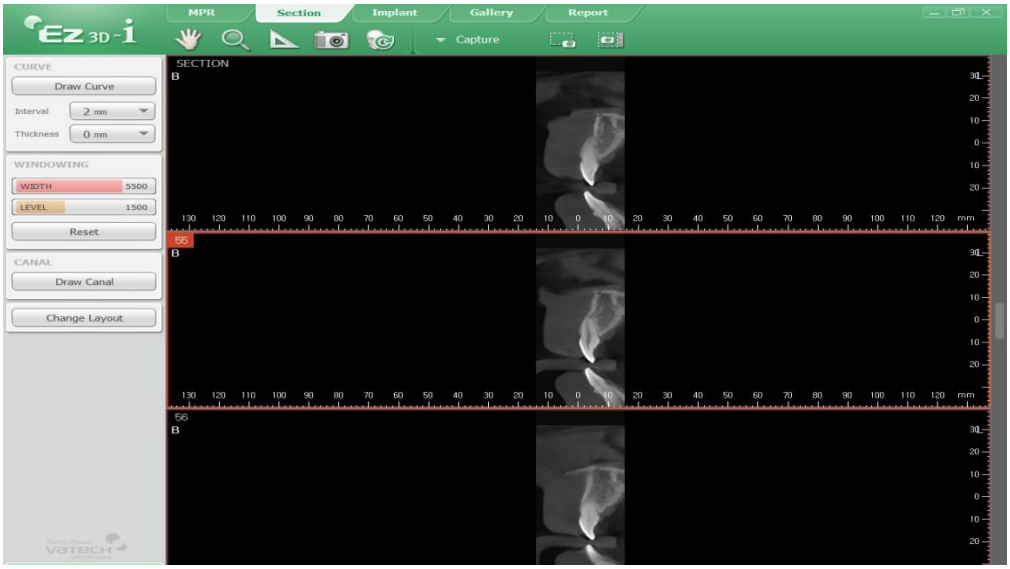
**Switching to Full Screen Mode**

**Switching 2D imageto Full Screen Mode**

1.Double click the Window Title to maximize the window screen.




**>> Panorama View Screen Maximization**




**>> Section View Screen Maximization**

2. Double click the Window Title in the maximized state and the window returns to its previous size.

**Tip**

Utilize the [Enter] button on the keyboard.

1. Click the Window Title and press the [Enter] buttonon the keyboard to maximize the window.
2. Press the [Enter] button on the keyboard in the maximized state to return the window to its previous size.

### Guide 2. Saving and importing the images work-in-progress

Ez3D-i is linked withEasyDent and EzDent-I, 2D Image Viewer.

[Auto Save] The contents are saved automatically when exiting Ez3D-i.
[Manual Save] The contents can be saved as a project and later imported from the project list.

**Note**

Auto Save, Manual Save

1. The Auto Save feature enables the information to be saved automatically whenexiting Ez3D-i.However, an auto saved project cannot be loaded from the Project list.
2. The Manual Save feature saves the information as a Project and later loads the information from the Project list.

**ImportingProject**

**Note**

Refer to 4-2➔ Guide 2➔'ImportingProject'.

**Saving Project**

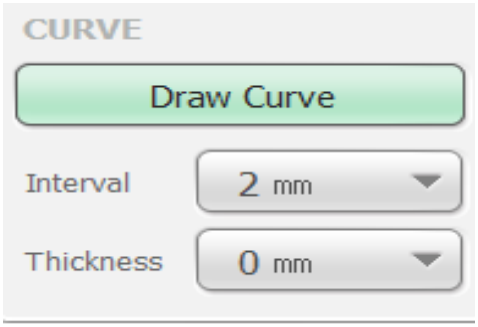
**Note**

Refer to 4-2➔ Guide 2➔'Saving Project'.

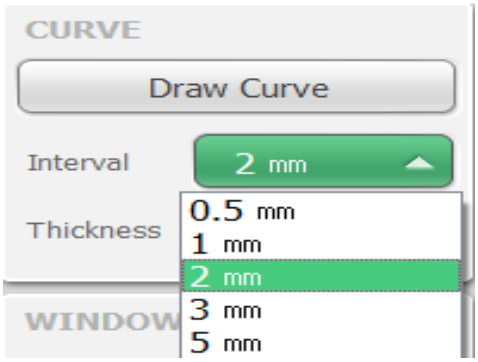
### Guide 3. Drawing and modifying a curve

Enter criteria which generate panoramic images from a CT image. Draw a curve on the axial image and the images are generated in the panoramic mode automatically.

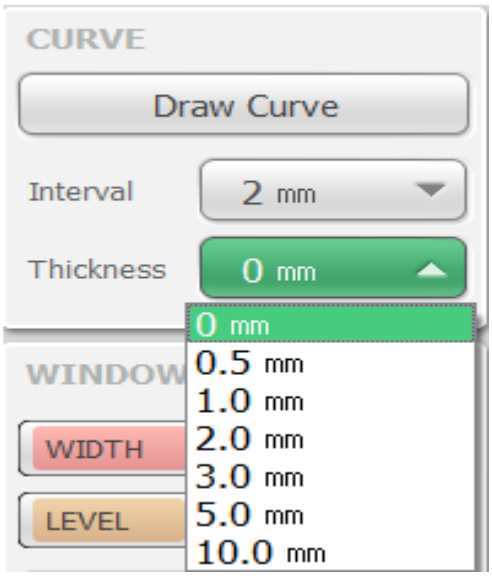
#### Drawing curve



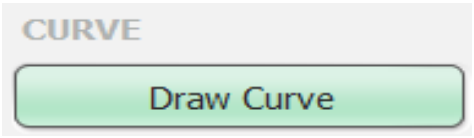

1.On the curve window, click the [Interval] combo box and select the thickness of the curve line.



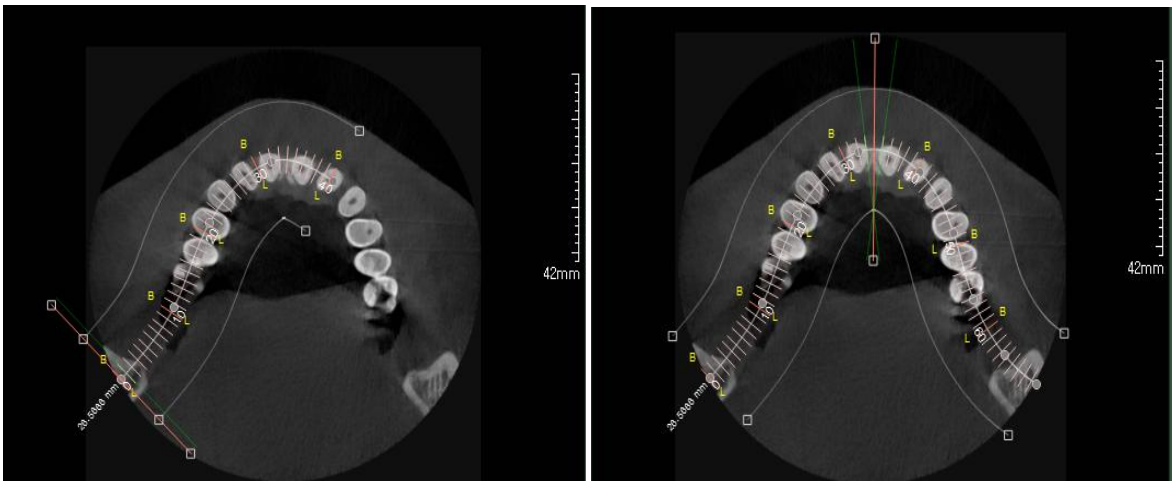

2. Click the [Thickness]combo box and select the thickness of thecurve line.



3.Click the [DrawCurve] button and the mouse cursor will change to the drawing mode.




4. Click points on the Axial Window to draw the curve line on the arch.Draw the curve line from left to right.




**Warning**

If the curve line is drawn from right to left side, right and left side is flipped on Panorama pane.

5. Click the right mouse button while drawing the curve line to delete the input point in the previous step.
6. Double click to complete thecurve line.

**Information**

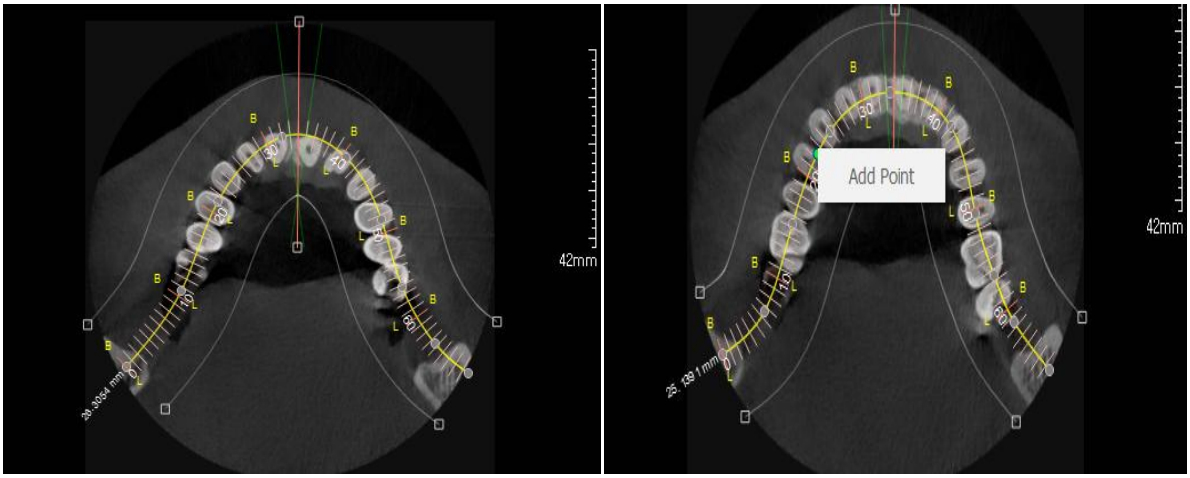
To delete the existing curve line, click the [Draw Curve] button.

**Information**

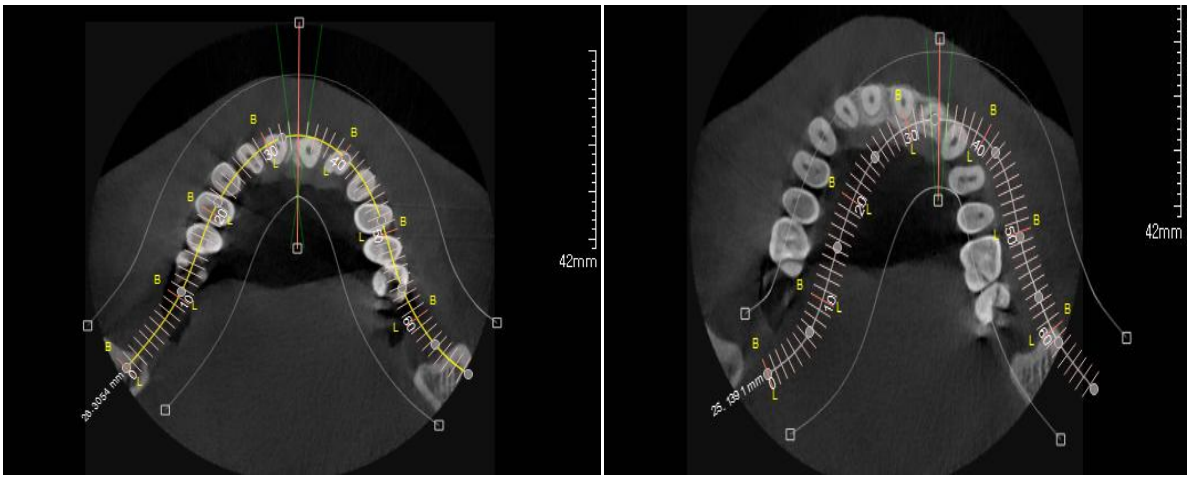
Click the [Draw Curve] button while drawing the curve line to cancel the Draw Curve function.

**Modifying the input curve**

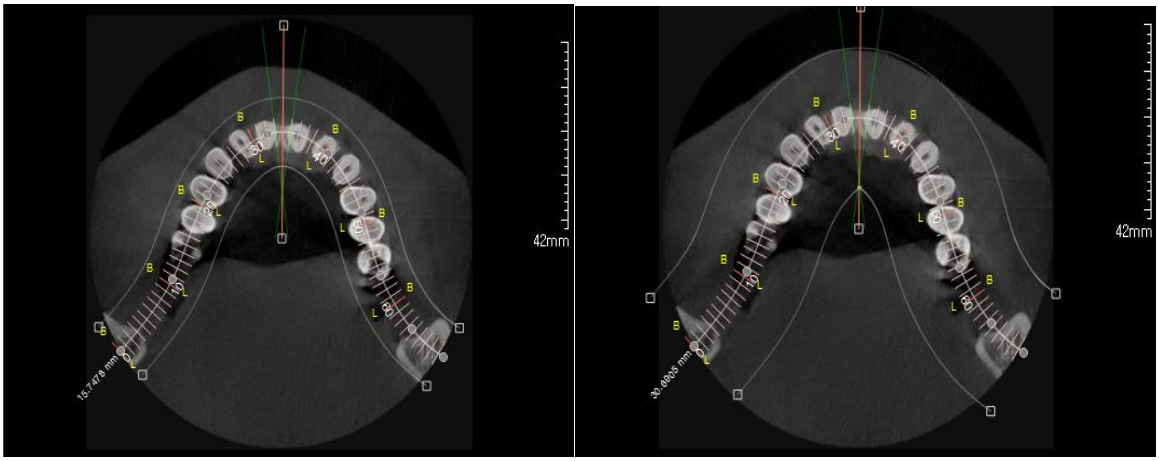
1. Click the point on the curve and drag it to the desired point to modify the line.
2. After selecting the curve line, click the right mouse button to display the following list. Click the [Add Point] button to add a new point.




3. To move the whole curve line, click the entire curve line and drag it to the desired location.

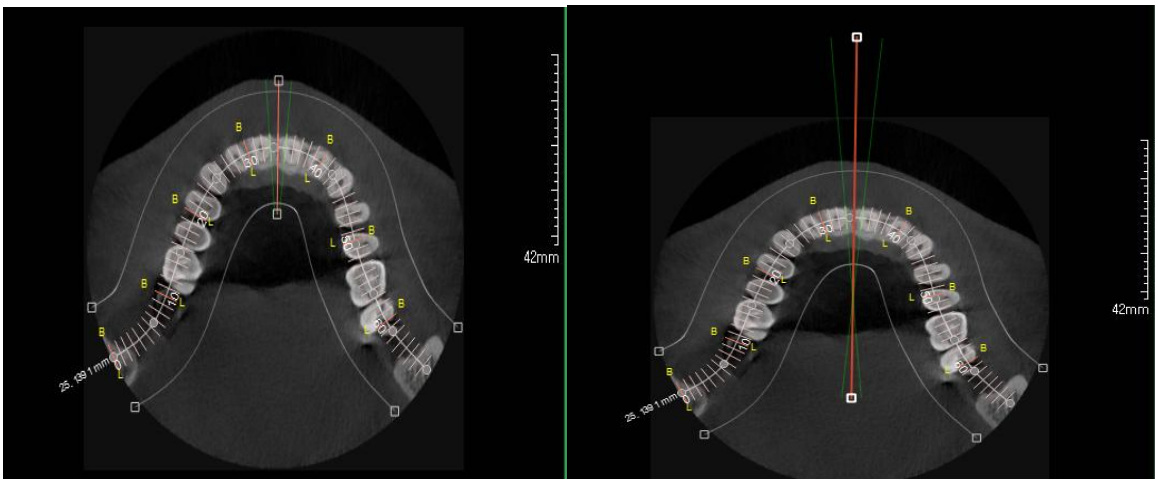


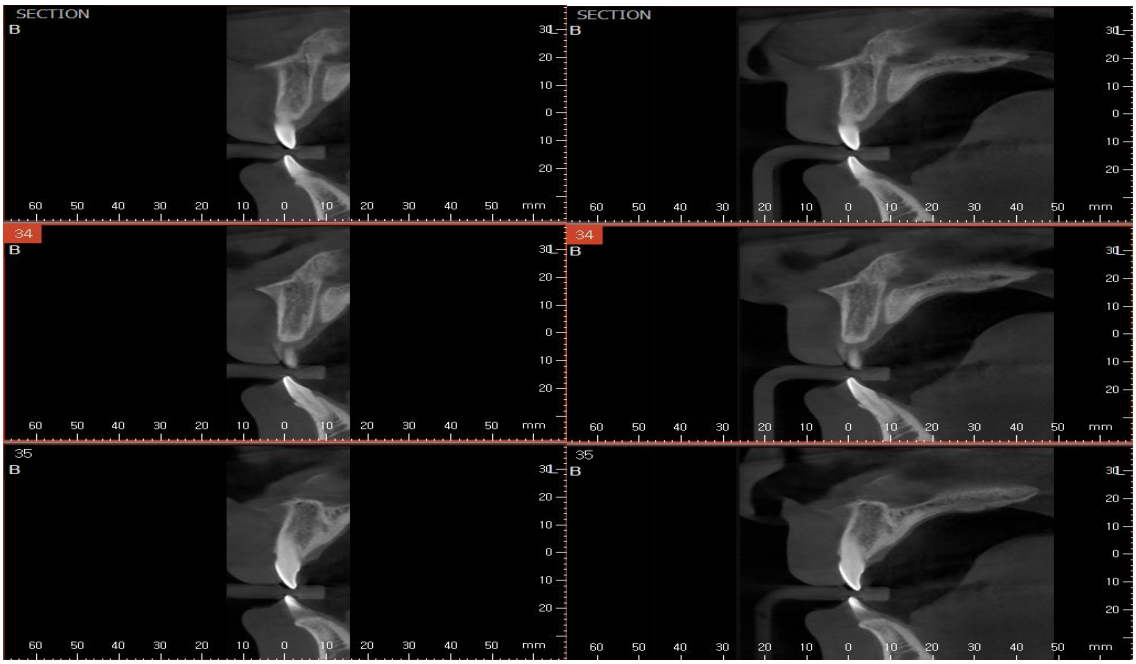

4. Move the start point and the end point of the curve line to adjust the length of the curve line.
5. Click and drag the square point of the curve line to adjust the thickness of the panorama view.




**>>Narrow Thickness** **>>Wide Thickness**

6. Click the end points of the vertical straight line of the curve line to adjust the horizontal size of the sectionalimage view.



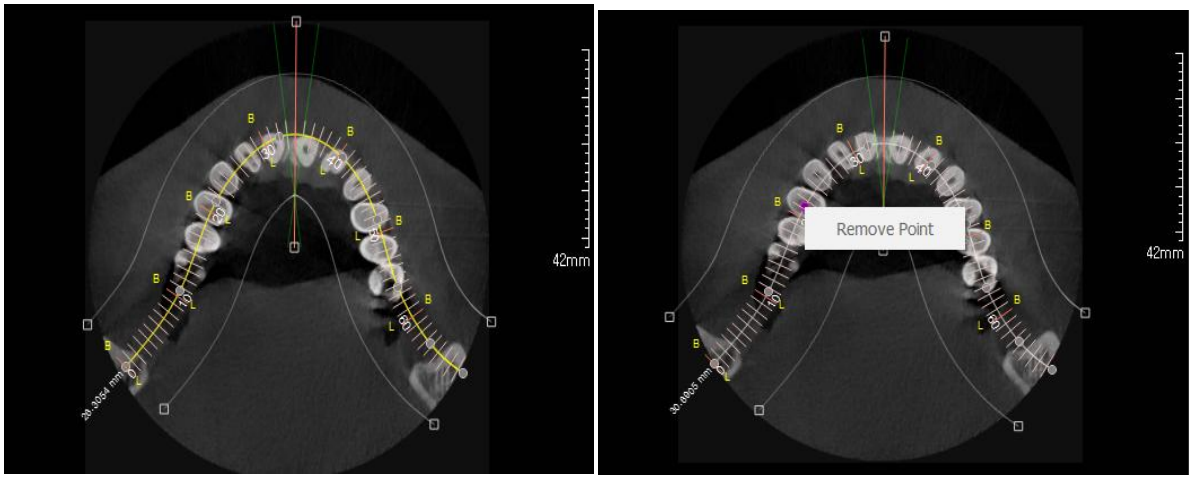

**>>Changing the horizontal size of the Section View**

**Information**

Modifying the input curve will be reflected in real-time in conjunction with the section view, panorama view.

**Deletingcurve point**

1.Select a point on the curve and click the right mouse button. The following list appears.




2. Click the [Remove Point] button to delete the point selected.

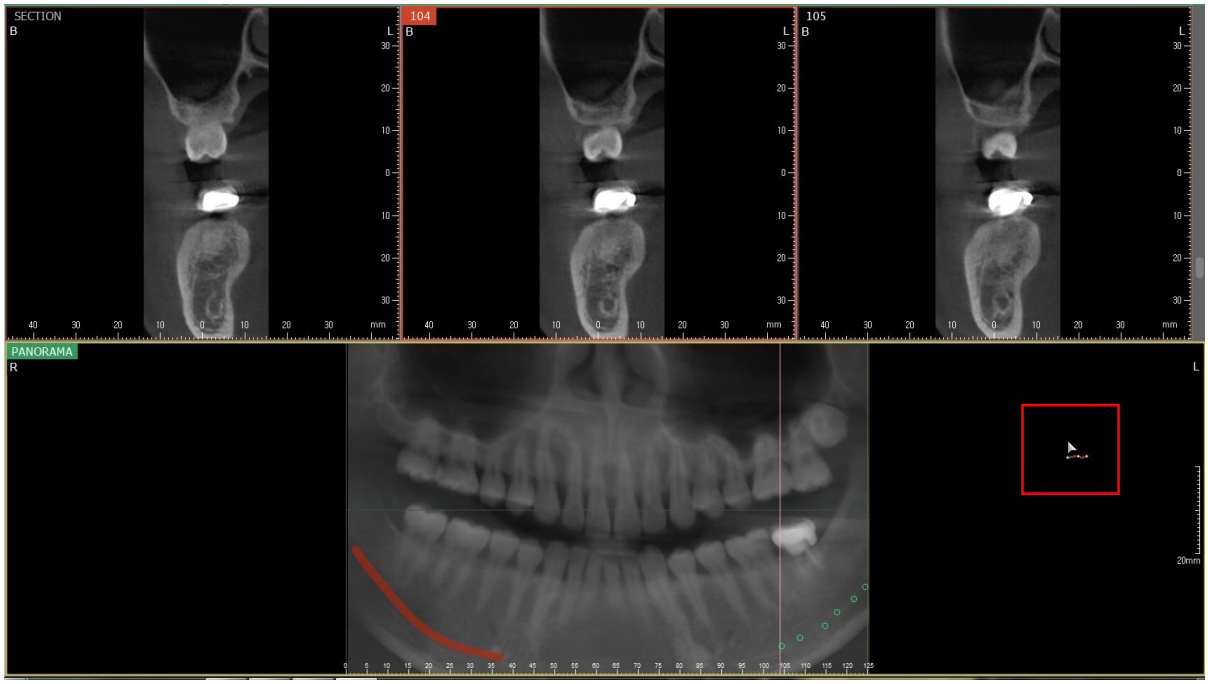
**Tip**

Alternatively, press the [Delete] button on the keyboard after selecting the point on the curve todelete.

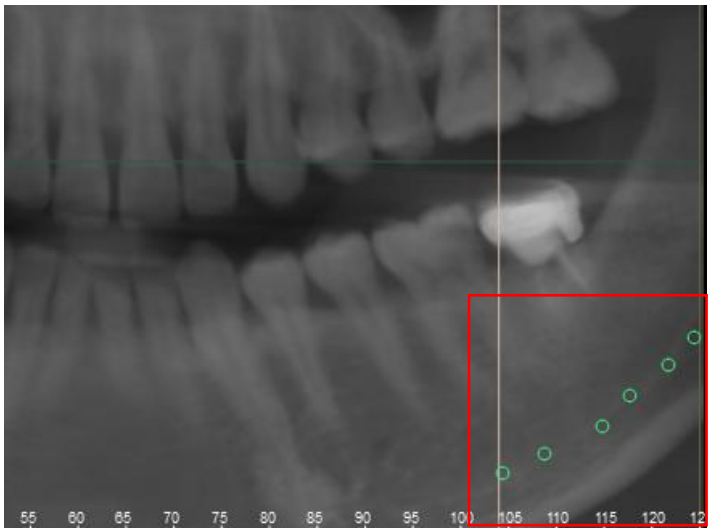
## Guide 4. Identifying the location of the nerve after canal drawing

### Drawing canal

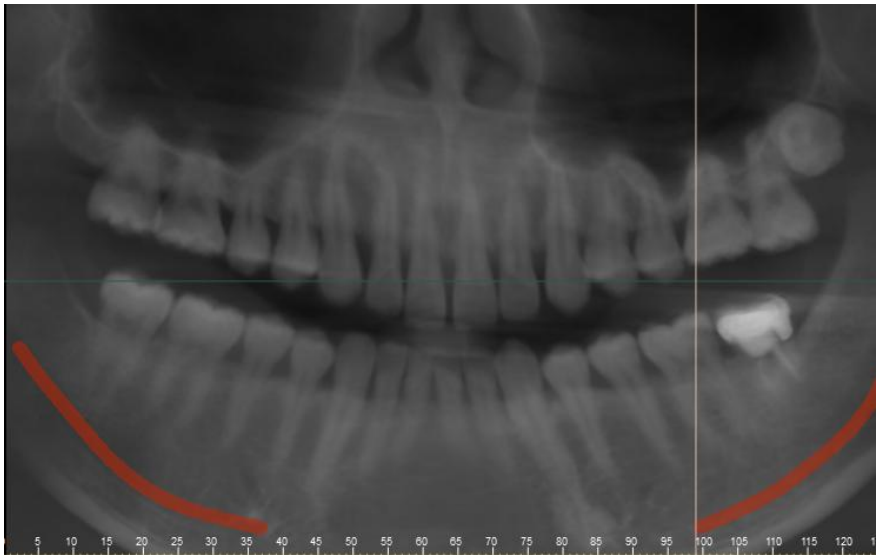
1. Click the [Draw Canal] button of the canal window. The following screen appears. The mouse cursor changes to the drawing mode.




2. To draw the canal line, click points along the mandibular nerve on the panorama windowor the section view.



3. Click the right mouse button while drawing the canal line to delete the input point in the previous step.
4. Double click to complete the canal line.



**Information**

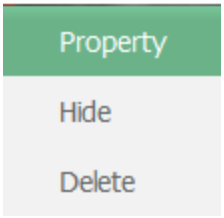
The completion of canal line can be verified after all points are connected.

**Tip**

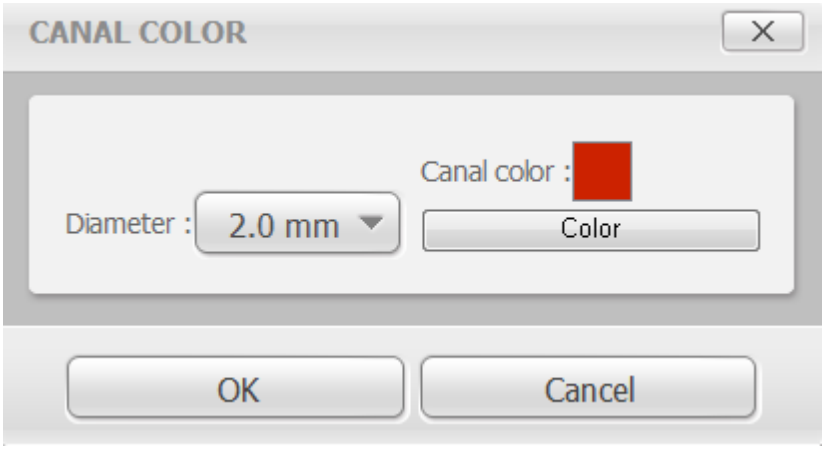
Clicking the [Draw Curve] button while drawing the canal line will cancel the Draw Canal function.
The function can be canceled by pressing the [Esc] button on the keyboard.

**Setting the diameter of the canal**

1.Select the canal line and click the right mouse button.  The following list appears.



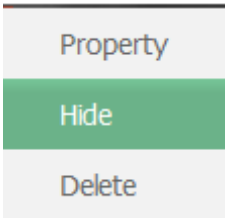

2. Click [Property] and the canal color window appears.




3. Click the [Diameter] combo box to select the diameter of the canal line.
4. Click [Color] and select the color of the canal line.
5. Click the [Ok] button and the changes are reflected in the canal line.

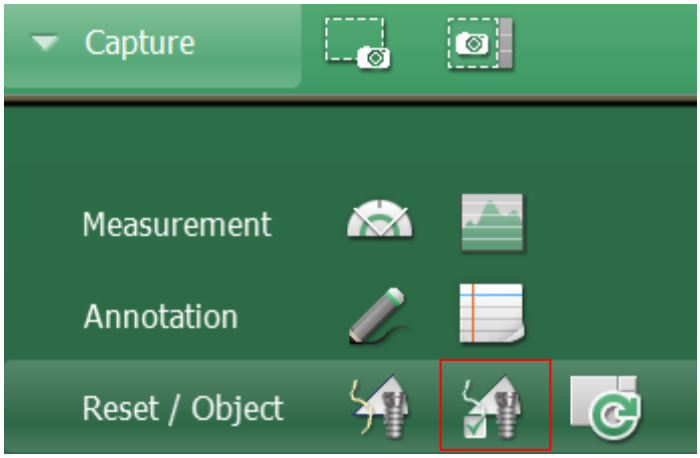
**Hidingcanal**

1.Select the canal line and click the right mouse button. The following list appears.

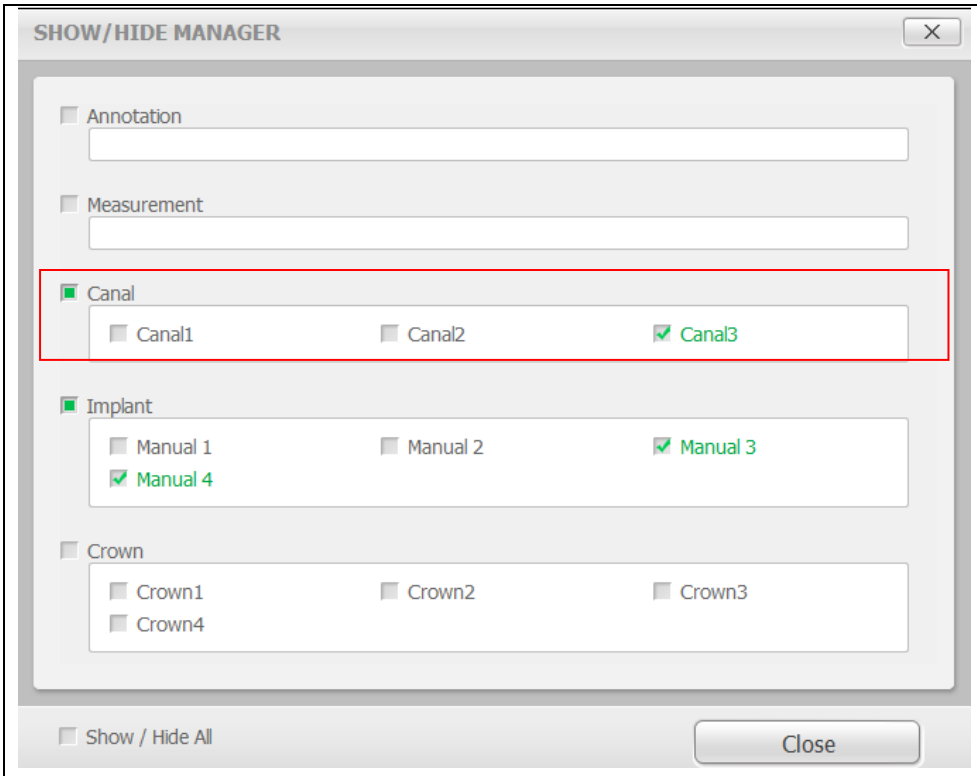



2. Click [Hide] and the canal line disappears from the screen.

**Note**



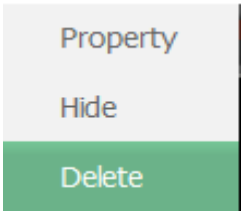

Click the Show Manager icon, and then the Show/Hide Manager window appears.




Uncheck the box next to the canal the user wants to hide.
Click [Close] and the canal line selected disappears from the screen.

**Deleting canal**

1.Select the canal line and click the right mouse button. The following list appears.




2. Click [Delete] to delete the canal line selected.

**Tip**

Alternatively, press the [Delete] button on the keyboard after selecting thecanal line to be deleted.

Guide 5. Tools in the Tool Bar

## The Main Tools

| Icon | Designation | Description of Features |
|---|---|---|
| | Panning | Move images |
| | Zooming | Magnify images |
| | Measure Length | Measure the distance between two points on the 2D image |
| | Capture View Frame | Capture the View Frame area |
| | Reset View | Initialize rotate, move, zoom |

## The Advanced Tools

| Icon | Designation | | Description of Features |
|---|---|---|---|
| | Capture | Capture Region | Capture the selected area |
| | | Capture Window | Capture the View Window Area |
| | Measurement | Measure Angle | Measure the angle between three points. |
| | | Profile | Density Profile between two points |
| | Annotation | Freedraw | Draw freely |
| | | Memo | Memo |
| | Reset/ Object | Turn On/Off Overlay | Show / Hide the entire input objects |
| | | Show Manager | Show / Hide individual input object |

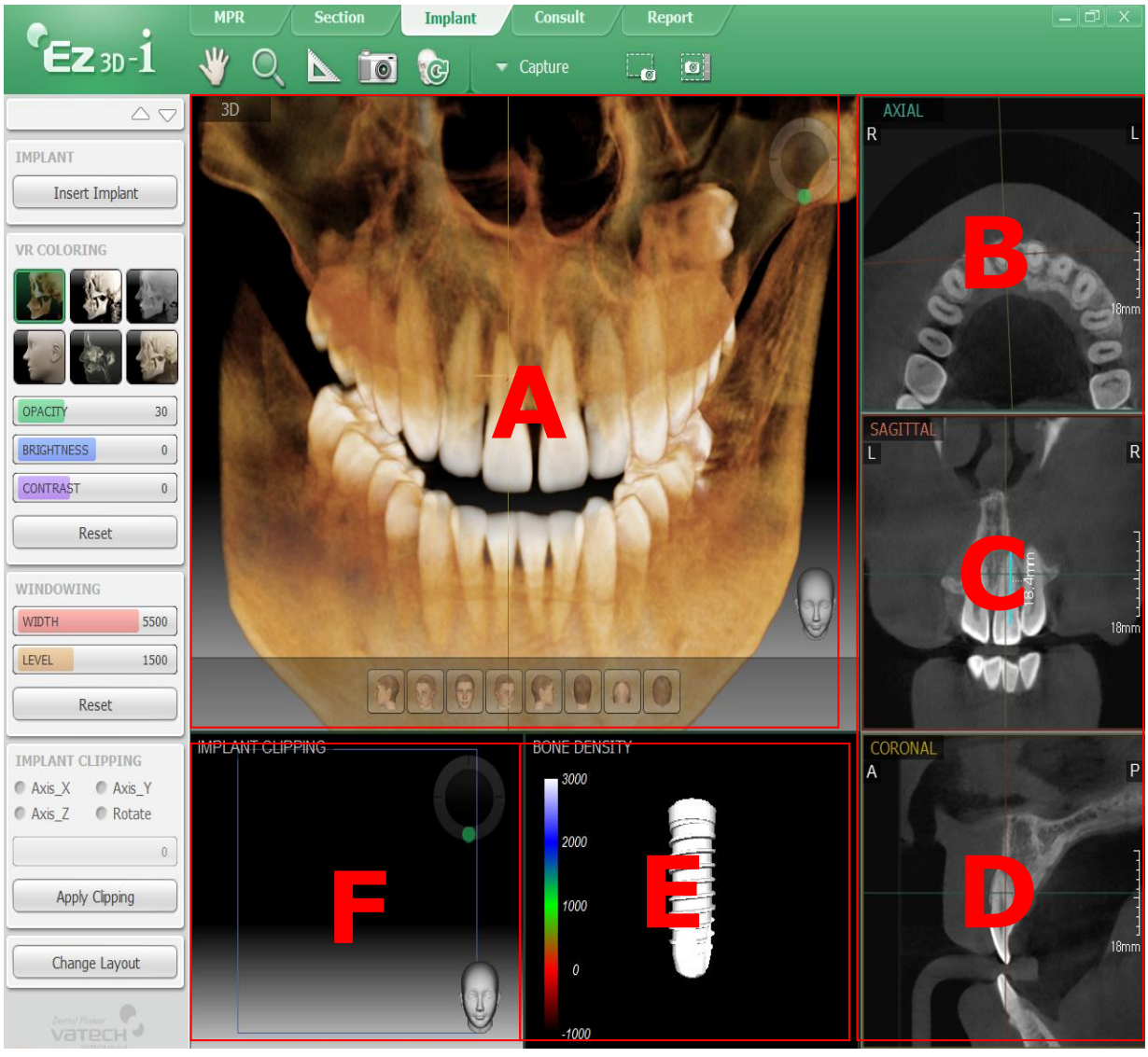
| | | | |
|---|---|---|---|
| | | Initialize | Initialize all changes |

## 4-4. Implant Tab

The Implant Tab provides the user the ability to simulate the implant placement at the desired tooth location.
The implant simulation capability of Ez3D-i includes the implant placement, the implant library and bone density around the implants.

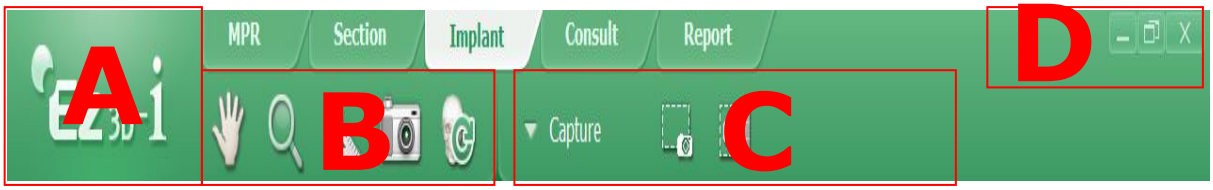
### Guide 1. Configuring and modifying Implant Tab Screen

**Workspace properties**




A is the 3D Volume Window screen.
B is the Axial Window screen.
C is the Sagittal Window screen.
D is the Coronal Window screen.
E is the Bone Density screen.  It can show the bone density around the implant.
F is the Implant Clipping View screen.It shows the clipping view area as the volume cube generated around the Implant Axis.

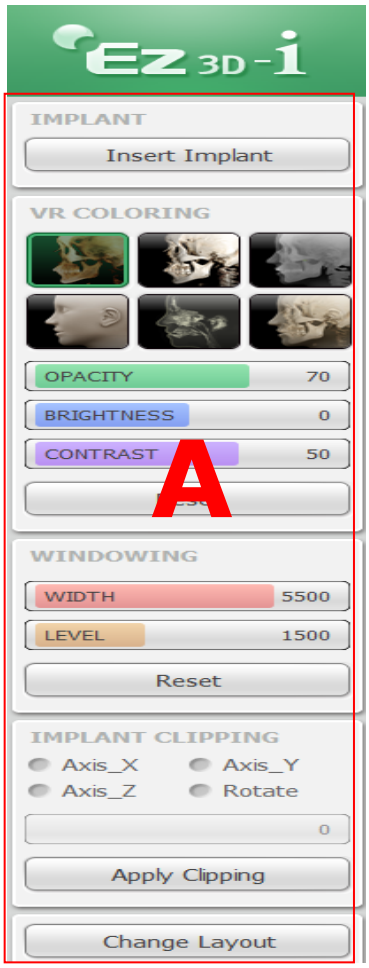
**Menu Button properties**




**Note**

Refer to 4-2➔ Guide 1➔'Menu Button properties'.

**Control Panel properties**




**Note**

Refer to 4-2➔ Guide 1➔'Control Panel properties'.

**ChangingLayout**

**Note**

Refer to 4-2➔ Guide 1➔'Changing Layout'.

**Switching to Full Screen Mode**

**Note**

Refer to 4-2➔ Guide 1➔'Switching to Full Screen Mode'.

### Guide 2. Saving and importing the images work-in-progress

Ez3D-i is linked withEasyDent and EzDent-i, 2D Image Viewer.

[Auto Save] The contents are saved automatically when exiting Ez3D-i.
[Manual Save] The contents can be saved as a project and imported from the project list.

**Note**

Auto Save, Manual Save

1. The Auto Save feature enables the information to be saved automatically when Ez3D-i ends.However, an auto saved project cannot be loaded from the Project list.
2. The Manual Save feature saves the information as a project and loads the information from the Project list.

**ImportingProject**

**Note**

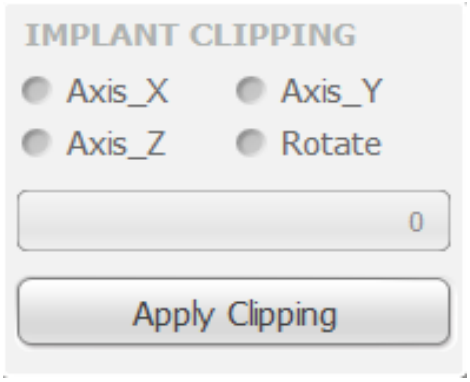
Refer to 4-2➔ Guide 2➔'ImportingProject'.

**SavingProject**

**Note**

Refer to 4-2➔ Guide 2➔'Saving Project'.

**Guide 3. Implant clipping**



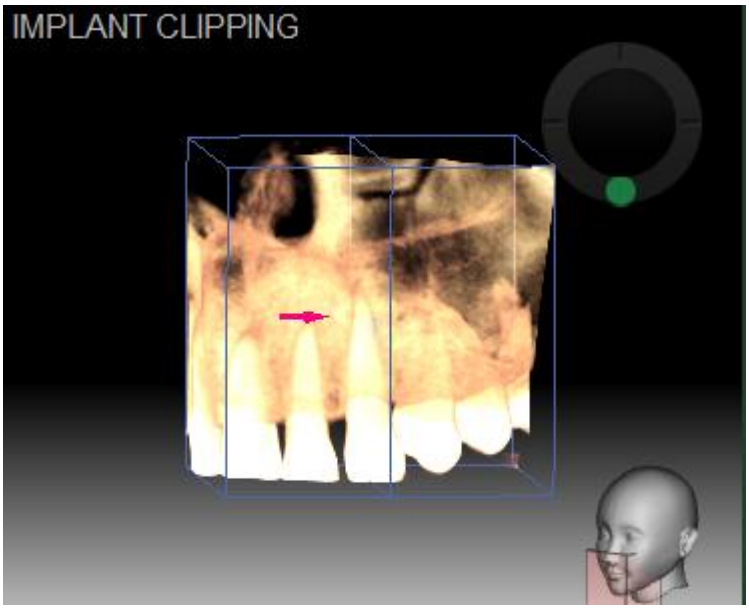

**Note**

Implant Clipping Window can display the location of adjacent tooth and surrounding structures.

Implant Clipping control can show the clipping images of tooth around the axis of the implant placed.

If there is no implant placement, only the Cube Line is visible.

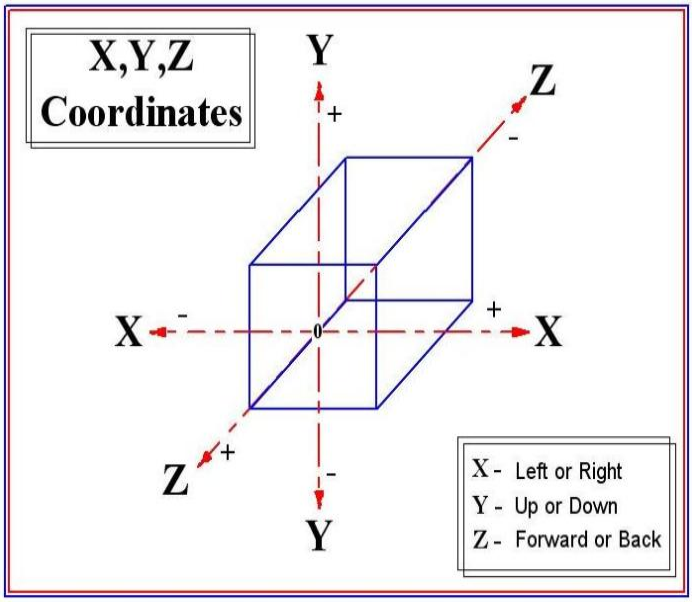
1.Insert the implant placement for the tooth the user desires. (Refer to Guide 4. Implant simulation.)
2. Upon completion, the implant placement appears in the Implant Clipping Window.

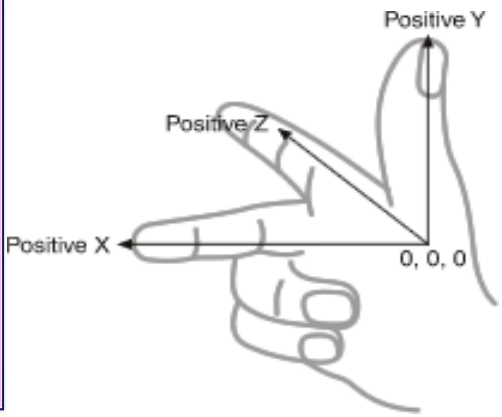


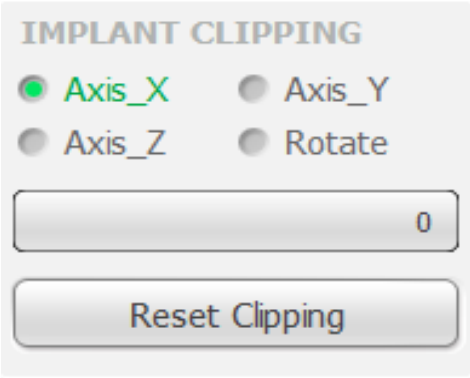

3. Select the axis desired in the Implant Clipping control.

**Tip**

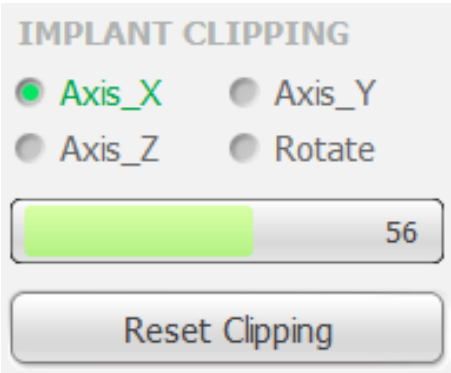
Refer to the X, Y, Z axis in the following figure.



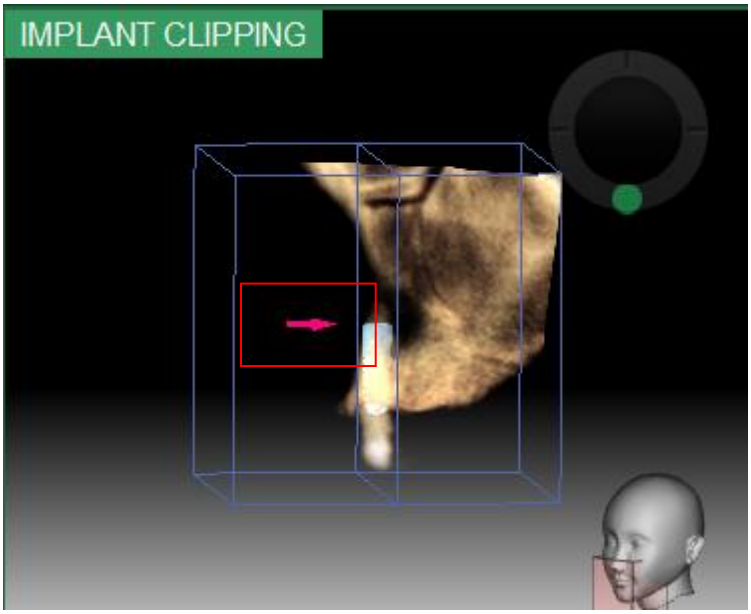

4. Select the crop area by moving the Clipping Slider to left and right.



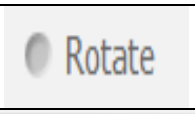
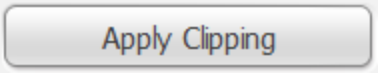

5. Image is cut to the center of the selected axis.

**Tip**

The pink arrow on the screen indicates the viewing direction of an implant.



**Implant Clipping Tools**

| Icons | Designation | Description of Features |
|---|---|---|
| | Axis_X | Cut the image around the X-axis |
| | Axis_Y | Cut the image around the Y-axis |
| | Axis_Z | Cut the image around the Z-axis |
|  | Rotate | Cut and rotate the image around the axial center of the implant |
|  | Apply Clipping | Crop the image |
| | Reset Clipping | Initialize the image |

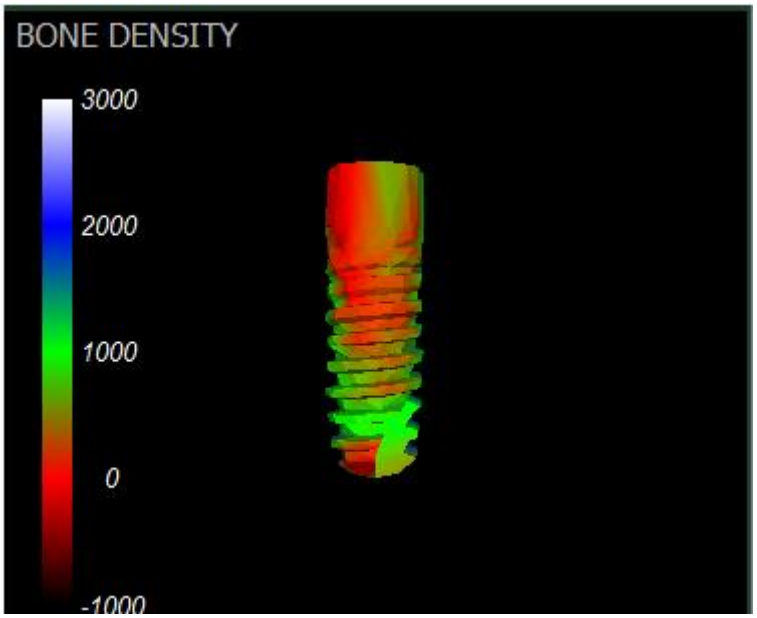
**Tip**

Apply Clipping button, before clipping, turns to Reset Clipping button after clipping.

**Bone Density**

**Note**

The density of the surrounding structures of the implant placement is displayed.
The colors close to red indicate lower density areas whereas the colors close to white indicate areas with higher density.



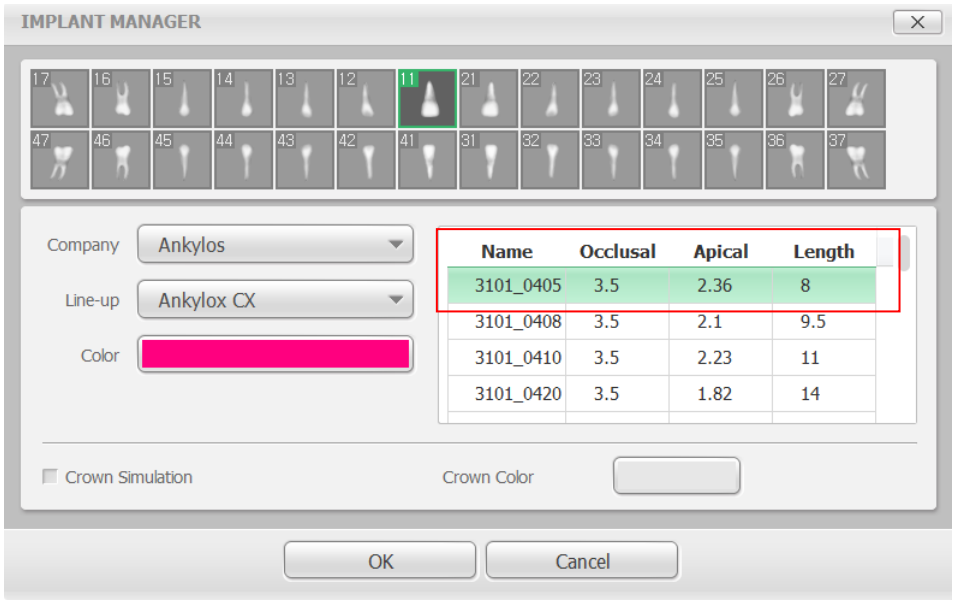
## Guide 4. Implant simulation

### Implant simulation with the [Insert Implant] button

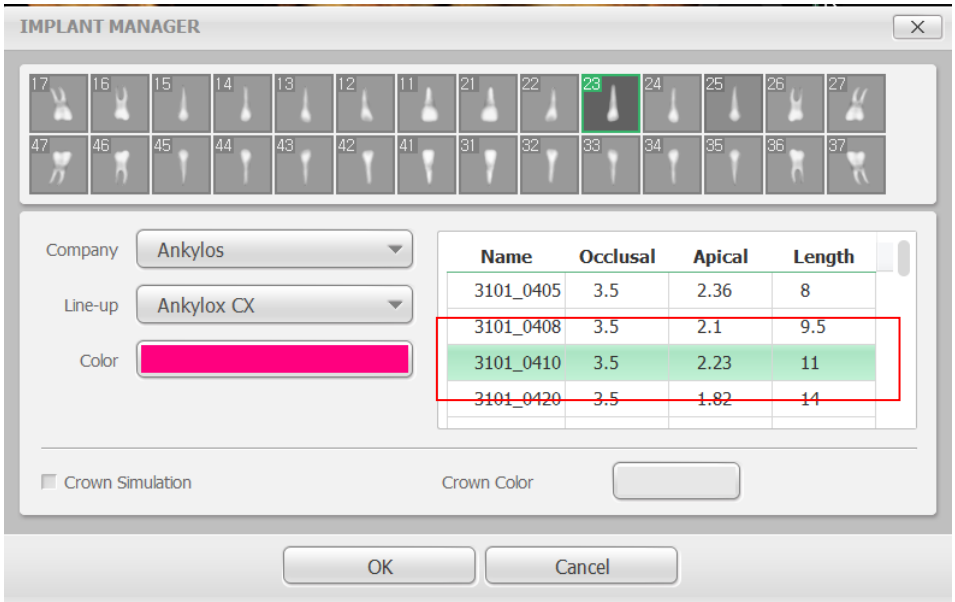
**Note**

The default implant value is determined according to the tooth number.

When the implant placement is carried out with the [Insert Implant] button, the default number of each implant is selected depending on the corresponding tooth number as follows.



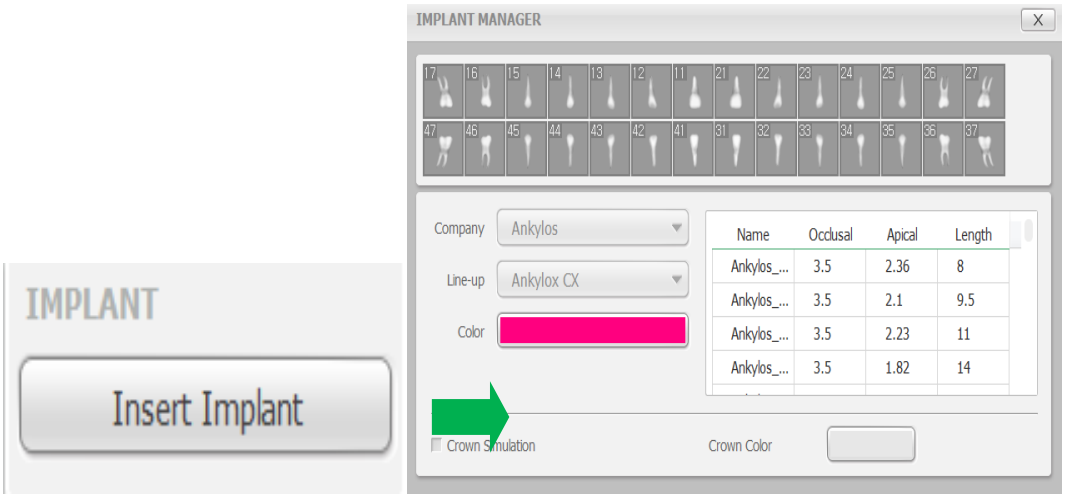

**>>The default implant number for the tooth number 11**



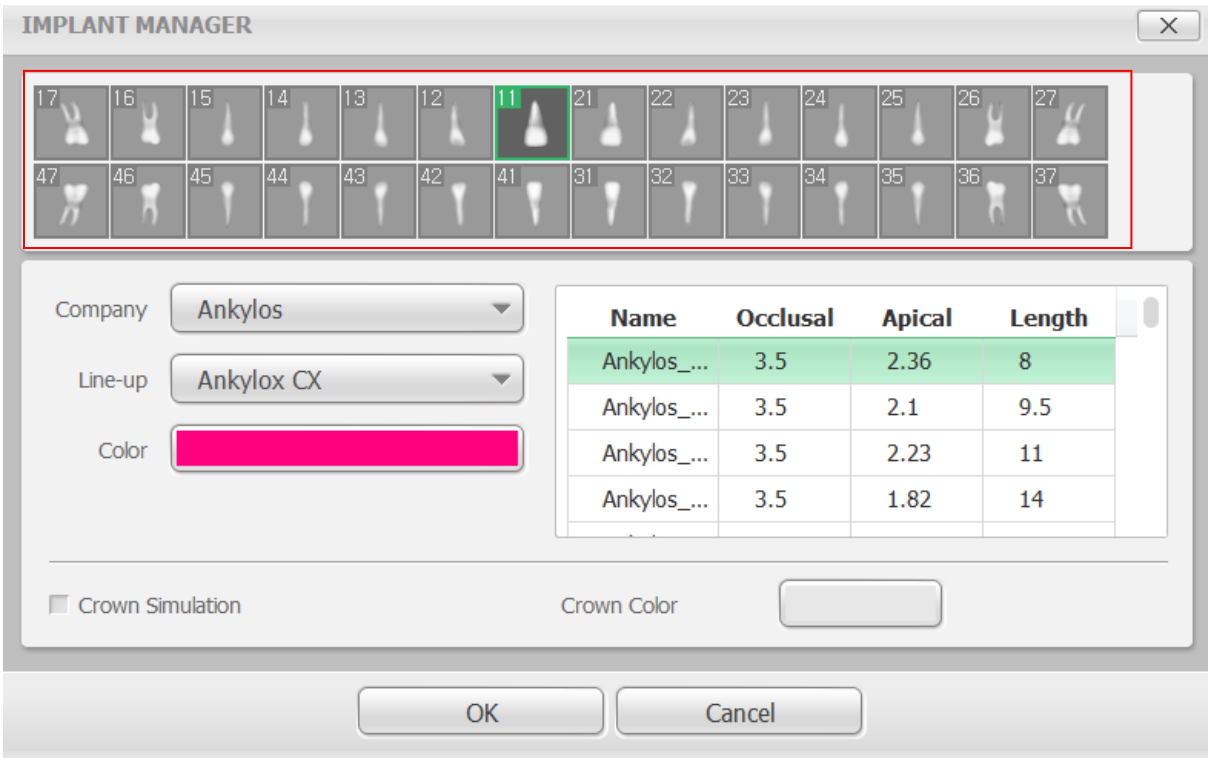

**>>The default implant number for the tooth number 23**

The user can select the implant value as desired by moving the scroll bar up and down.

1. Double click the tooth to place an implant and the screen displays the corresponding tooth.
2. Adjust two axises according to the direction of tooth in the axial, sagittal and coronal window screens.
3. Click the [Insert Implant] button. The Implant Manager window appears.

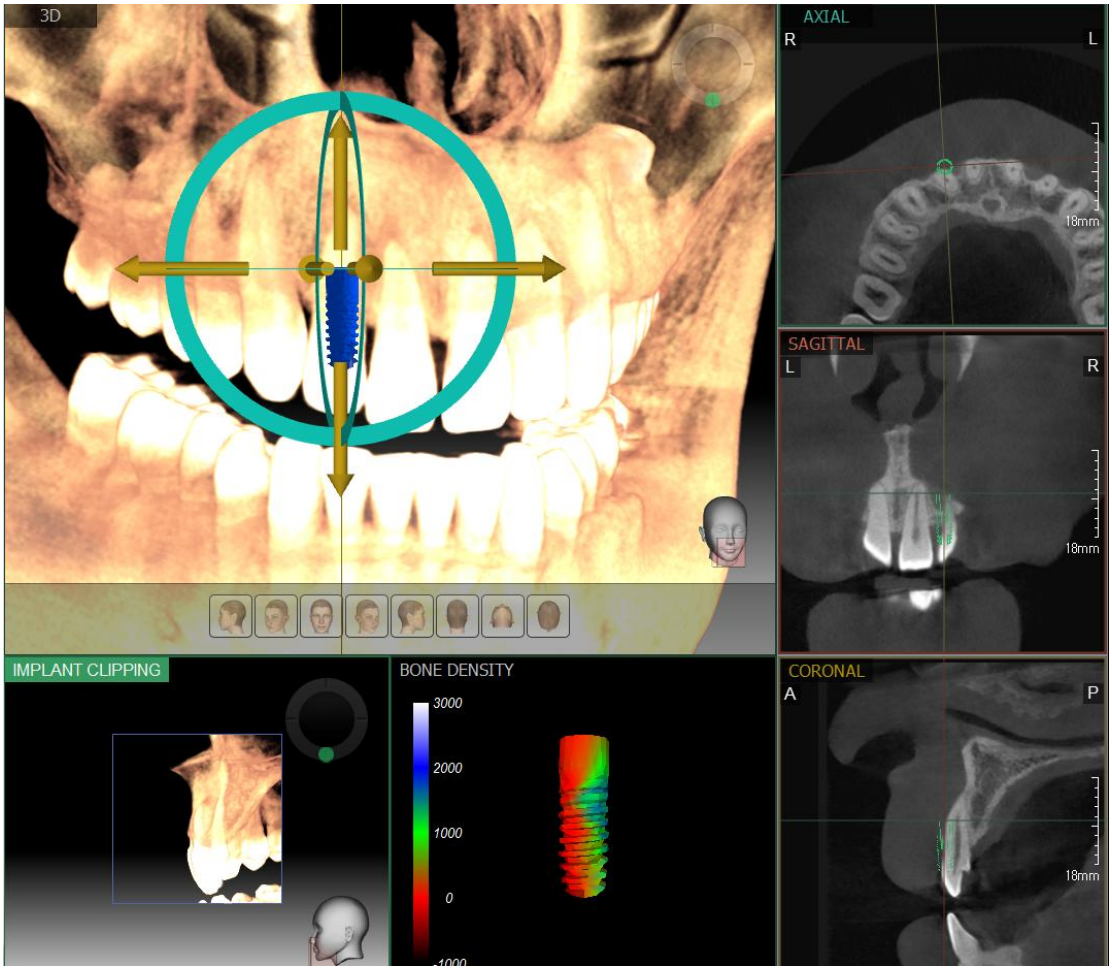



4. The appropriate tooth number is located and selected.




5. Select the company name and the implant line upfor simulation by clicking the combo box
6.Click and select the implant model by moving the scroll bar.
7. Select the color of the implant.
8. For the crown simulation, click the [Crown Simulation] button.
9. To select the color of the crown, click the [Crown Color] button.
10. When the select color window appears, click the color of choice.
11. Click the [OK] button.

12. The implant placement is performed at the corresponding tooth.

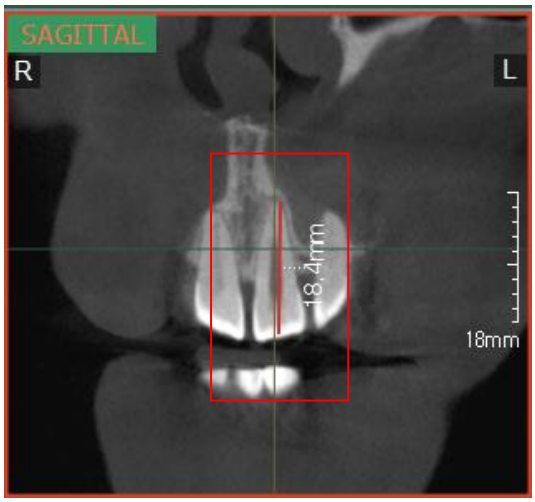


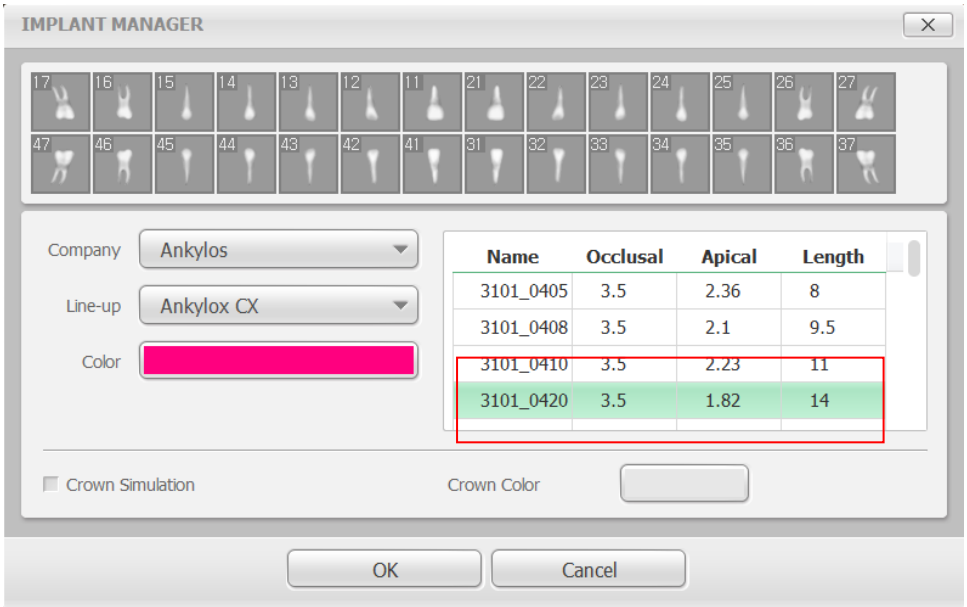
**Auto Implant simulation with the measured length**

**Note**

The implant default value depends on the corresponding tooth number

[Measure Length] When the implant placement simulation is performed with an icon, the implant default value is selected based on the approximation of the measured length, not the corresponding tooth number.



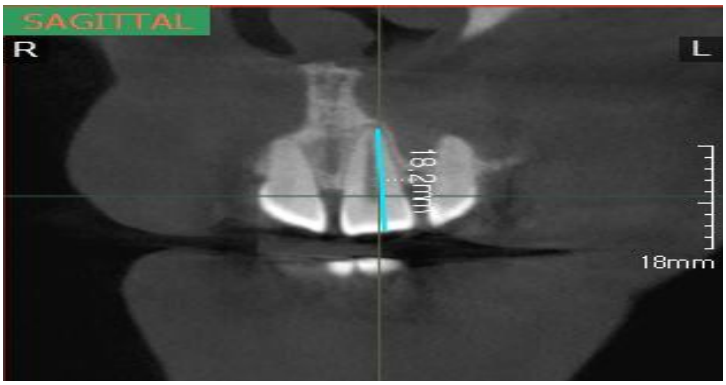




**>>The implant default value determined by the approximation of the measured length**

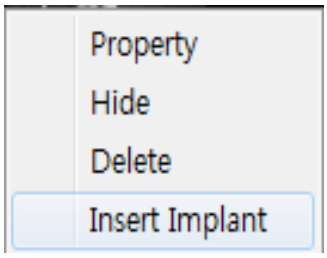
The user can select the implant value as desired by moving the scroll bar up and down.

1. Click the [Measure Length] icon.

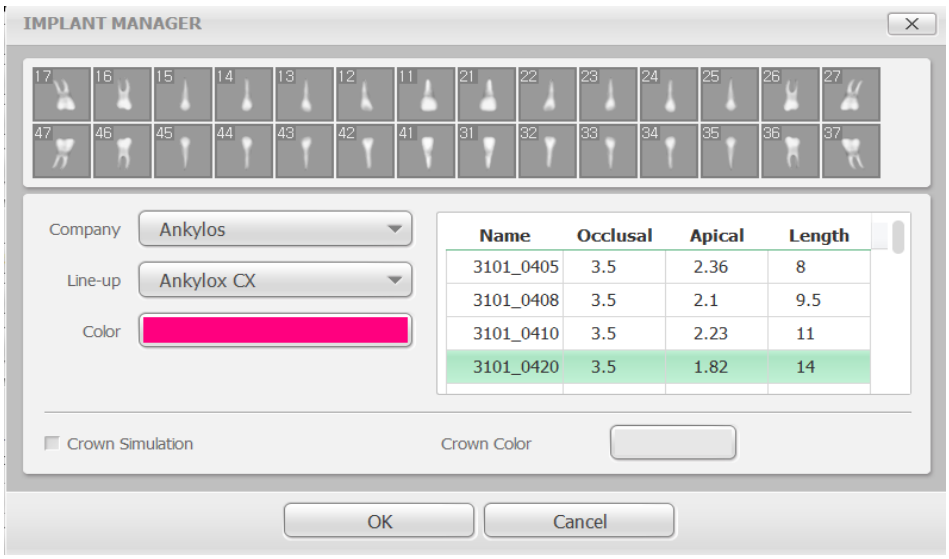
2. Measure the length by clicking two points in the 2D Coronal image of the tooth for implant simulation.




3. After completing the measurement, click the [Measure Length] icon to terminate its function.
4. Click the line indicated by the measured length, and then click the right mouse button.
5. Upon clicking the right mouse button, the following list appears.



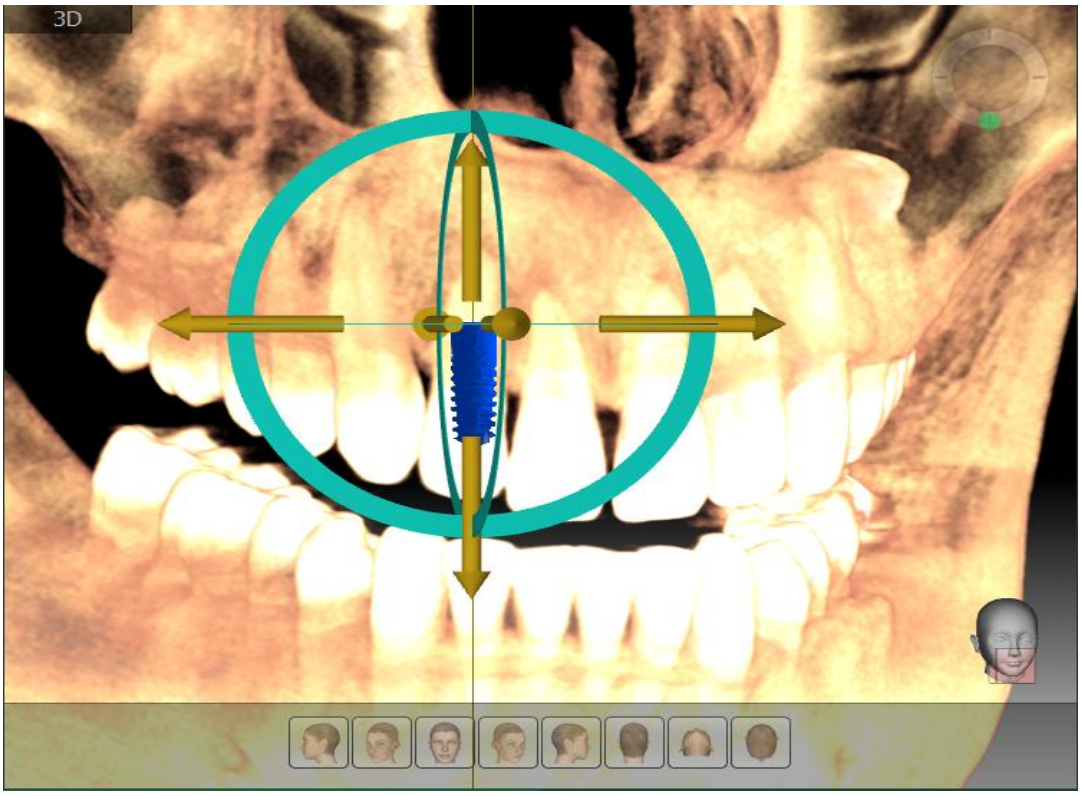

6. Click the [Insert Implant] button and the Implant Manager window appears.



7. 4-3➔ Guide 4➔Implant simulation with the [Insert Implant] button ➔Proceed in the same way as No. 4.

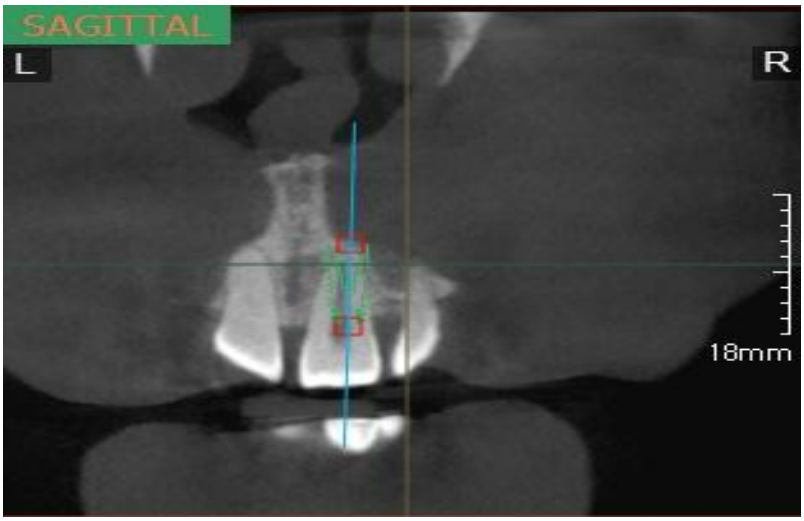
**Moving and rotating the implant**

1. Select the implant from the 3D Window. The Controller appears at the center of the implant.




2. Hold and drag the arrow to move or rotate the implant as desired.

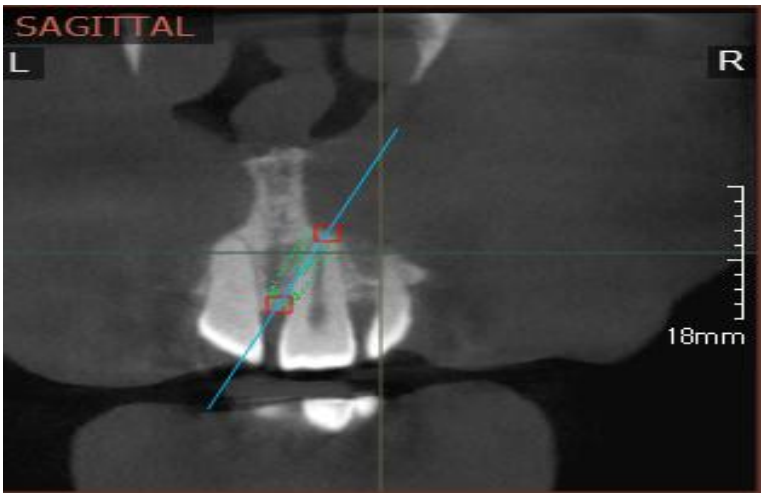
1. After choosing the implant from a 2D image, a control line is created to rotate the implant.




2. Click and drag a point to move and rotate the implant.

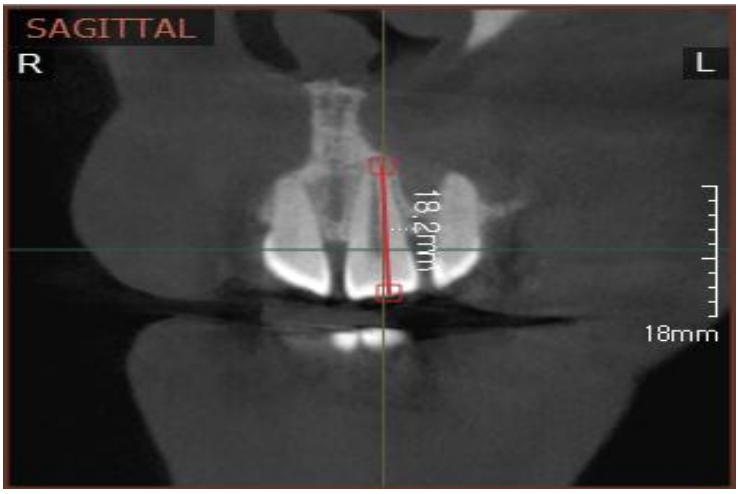
3. Click on the implant. When the mouse cursor changes to the cross , the implant can be moved.

4. Click on the implant. Whenthe mouse cursor changes to the curved arrow , the implant can be rotated.

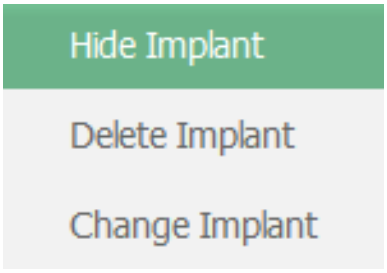


**Hiding theimplant**

1. Click and select the implantfrom the 2D image.




2. Click the right mouse button, and the following list appears.



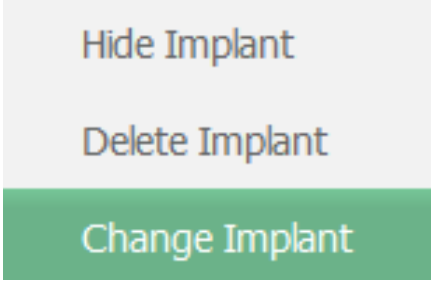

3. Click [Hide Implant] and the corresponding implant disappears from the screen.

### Modifying theimplant

**Note**

The tooth number of implant placement, the implant company, product family, model, and color of the implant and the crown placement can be modified.

1. Click and select the implant from the 2D image.
2. Click the right mouse button and the following list appears.



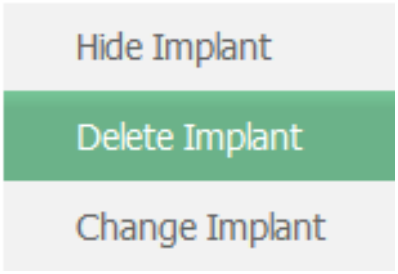

3. Click [Change Implant], and the Implant Manager window appears.
4. Modify the implant information as desired.
5. Click the [Ok] button to display theimplant modification.

**Tip**

Double click the implant placement on the 2D image to modify.

**Deleting the implant**

1. Click the implant from the 2D image.
2. Click the right mouse button, and the following list appears.




3. Click [Delete Implant] to delete the implant from the screen.

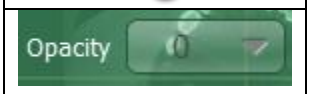
Guide 5. Tools in the Tool Bar

**The Main Tools**

| Icons | Designation | Description of Features |
|---|---|---|
| | Panning | Move the image |
| | Zooming | Magnify the image |
| | Measure Length | Measure the distance between two points on the 2D image |
| | Capture View Frame | Capture the View Frame area |
| | Reset View | Initialize rotate, move, zoom |

**The Advanced Tools**

| Icons | Designation | | Description of Features |
|---|---|---|---|
| | Capture | Capture Region | Capture the selected region |
| | | Capture Window | Capture the View Window area |
| | Measurement | Measure Angle | Measure the angle between three points |
| | | Profile | Density Profile between two points |
| | | Measure Volume | Obtain the volume of the threshold area from the selected region |
| | Annotation | Freedraw | Draw freely |
| | | Memo | Memo |
| | | Sculpt | View the selected area separately |

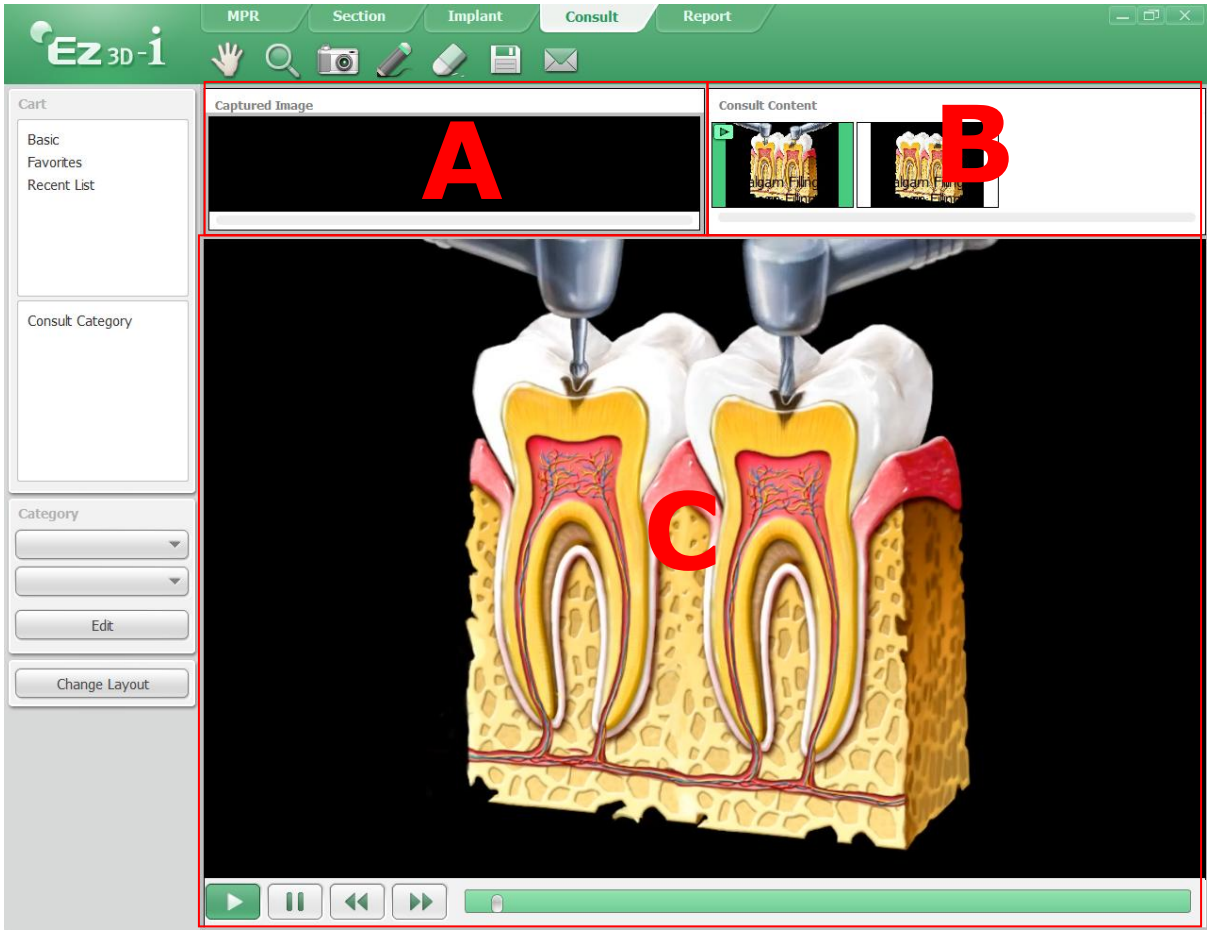
| | | | |
|---|---|---|---|
| | Sculpt | Invert | Invert the Sculptarea |
| | | Undo | Go to the previous step |
| | | Redo | Revert Undo |
| | | Reset | Initialize Sculpt |
|   | | Opacity | Adjust the transparency of the Sculpt area |
| | Reset/ Object | Turn On/Off Overlay | Show / Hide the entire input objects |
| | | Show Manager | Show / Hide the individual input object |
| | | Initialize | Initialize all changes |

## 4-5. Consult Tab

The Consult Tab is provided to manage the image data necessary for counseling patients by putting the images in the cart for each treatment category.
Ez3D-i can add, edit, and delete the images in the cart as desired for patient counseling.

### Guide 1. Configuring and modifying Consult Tab screen

#### Workspace properties




A is the Captured Image screen.The image captured by the user in other tabs is displayed.

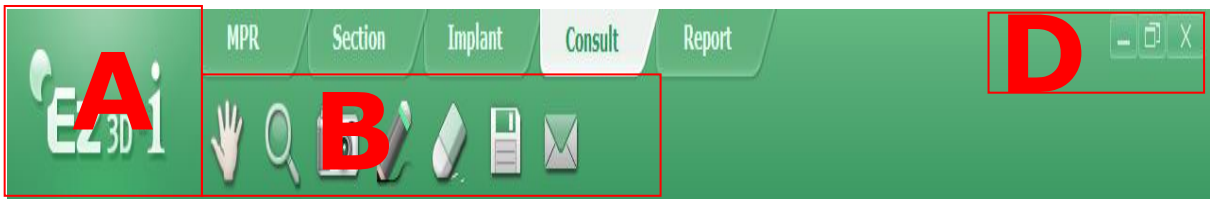
B is the Consult Content screen. It shows the list of videos and images for patient counseling.

C is the screen showing the consult content. The user can drag and drop to play the videos and images in the list above for patient consultation.

**Information**

If operating system of user's PC is Windows 7 N edition and Media Player has not installed yet, video for consultation does not play.
Please visit http://windows.microsoft.com, download Media Player 12 and install it.

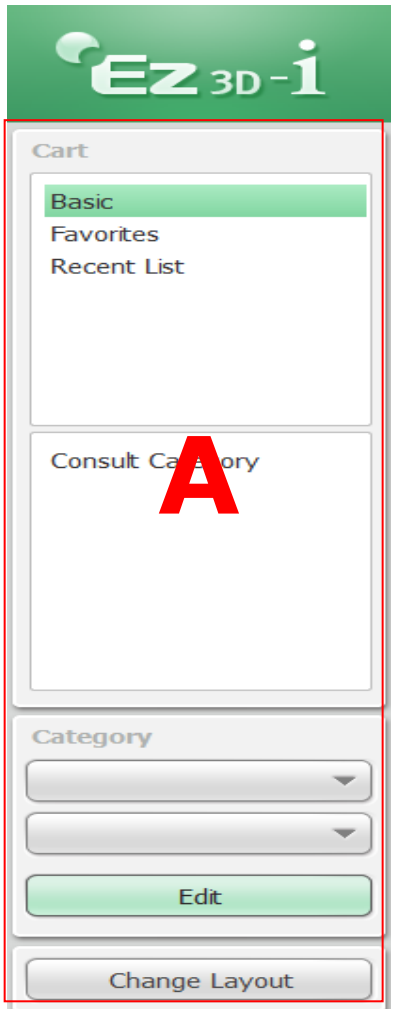
**Menu Button Properties**




**Note**

Refer to 4-2➔ Guide 1➔'Menu Button properties'.

**Control Panel Properties**




**Note**

Refer to 4-2➔ Guide 1➔'Control Panel properties'.

**Changing Layout**

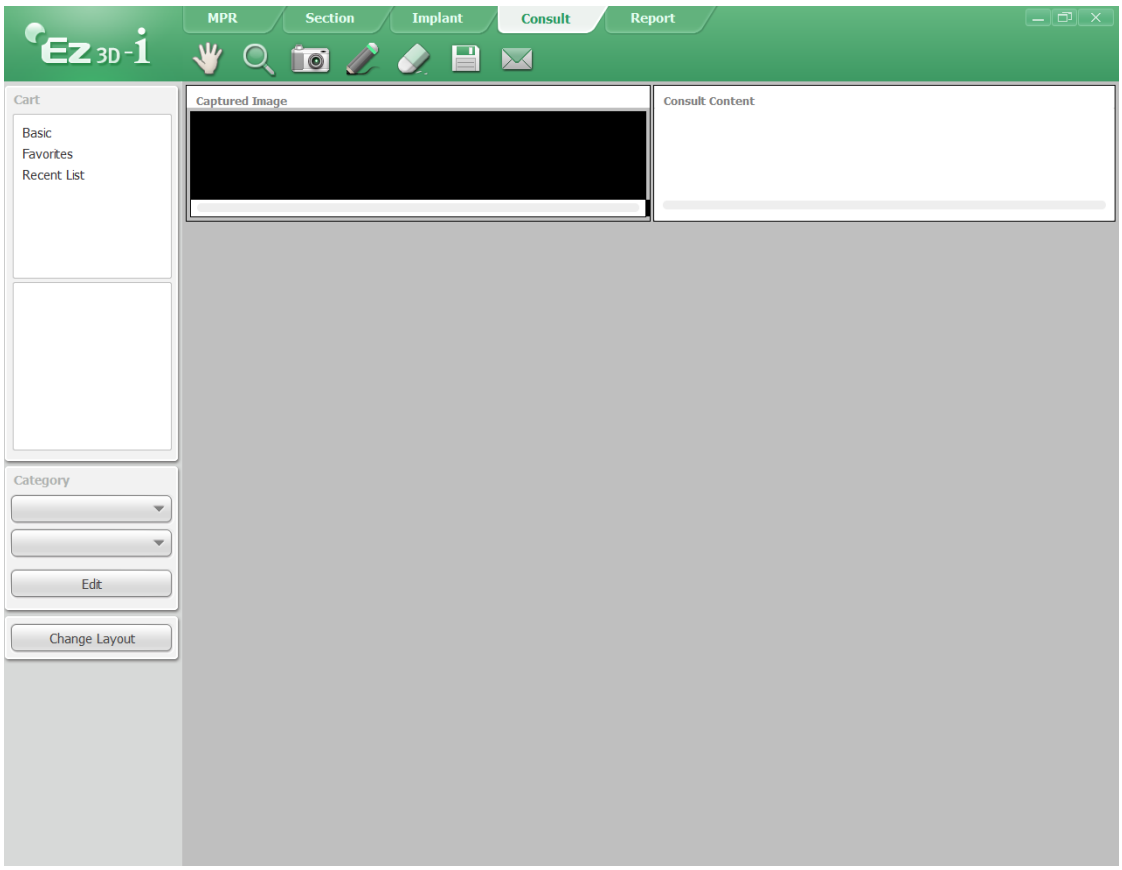
**Note**

Refer to 4-2➔ Guide 1➔'Changing Layout'.

**Guide 2.Selecting the consulting images in the cart**

**Note**

Basic category includes basic information and videos necessary for patient counseling.
Favorite category includes the user's preferred consultation video.
Recently List category includes the user's most recently used images for counseling.



**Guide 3. Editing the Cart**

**Note**

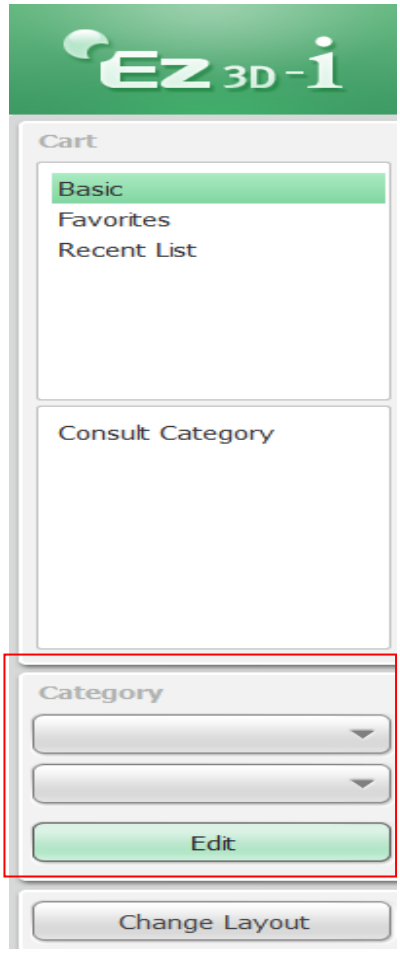
The cart can add, change, and delete a category.
Within a category, the user can add new content or create a new folder.

**Information**

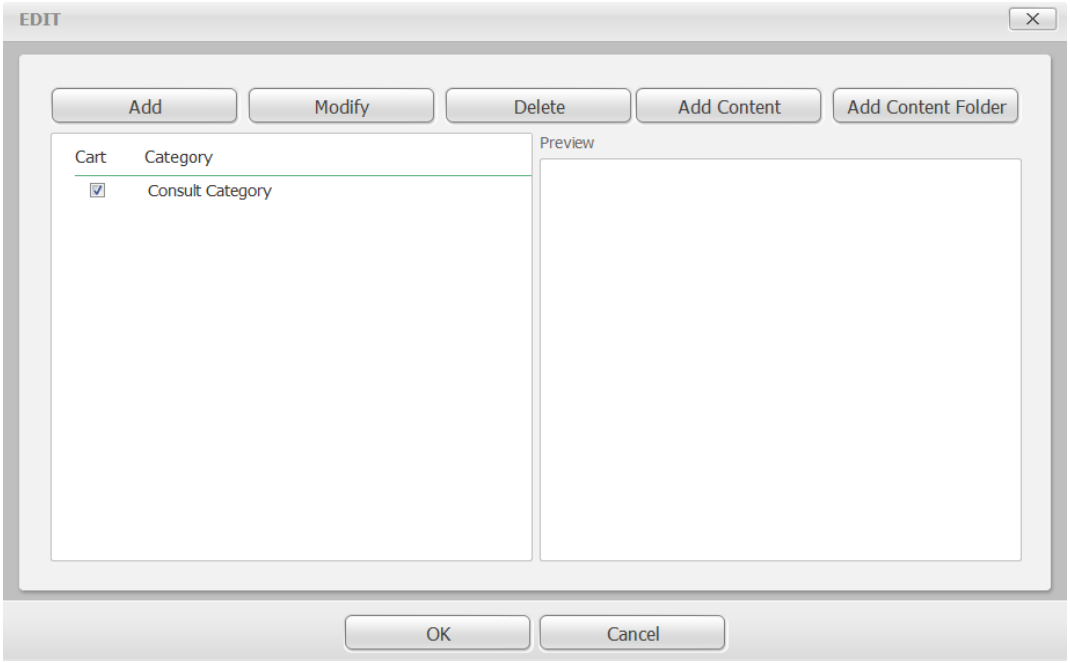
As the default setting, the Basic and Favorite category cannot add, change or delete.

**Adding a new Category**

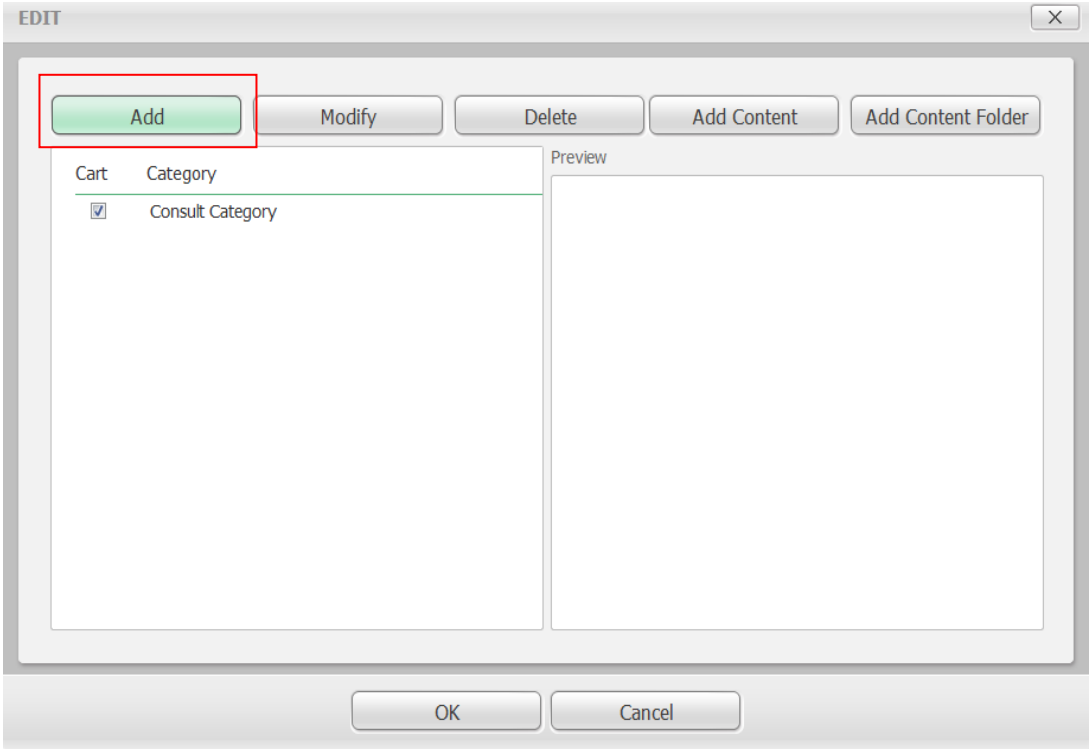
1. Click the [Edit] button in the Category window.



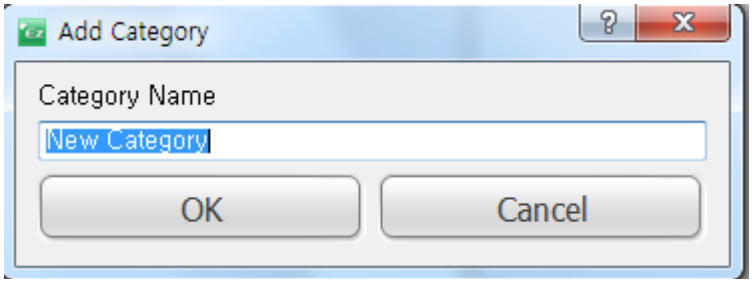
2. The Edit window appears.




3. Select the category to add to a sub-category.
4. Click the [Add] button and Add Category window appears.



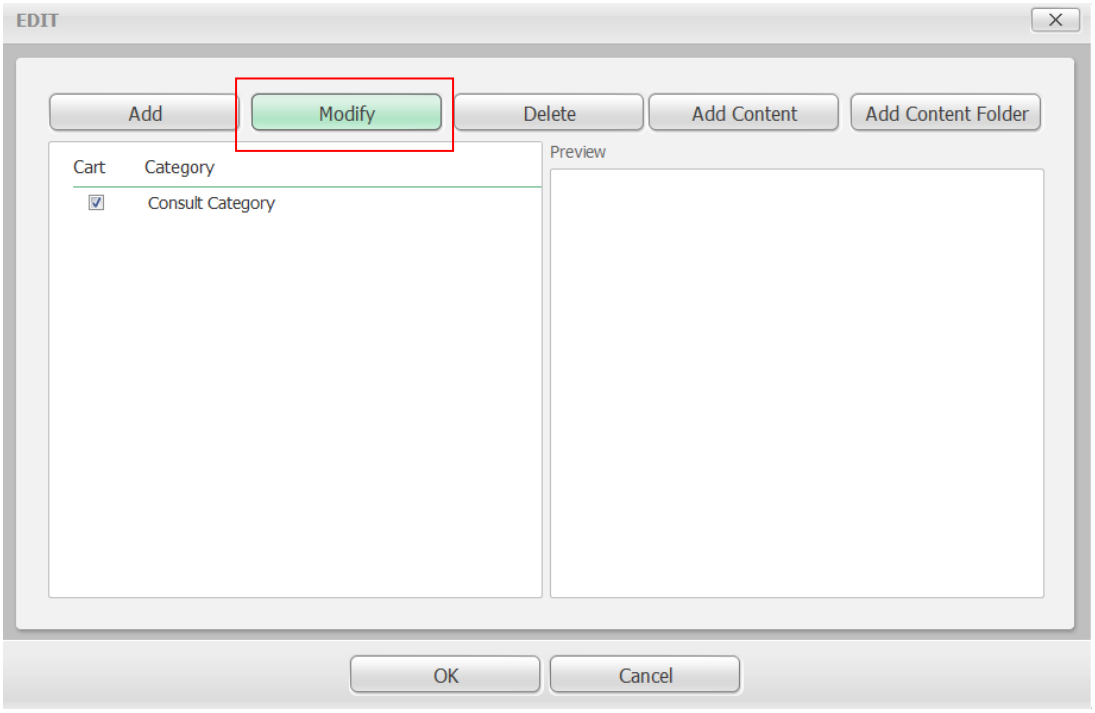
5. Enter the name of the category the user desires.




6. Click the [Ok] button to generate the input category.

**Changinga category**

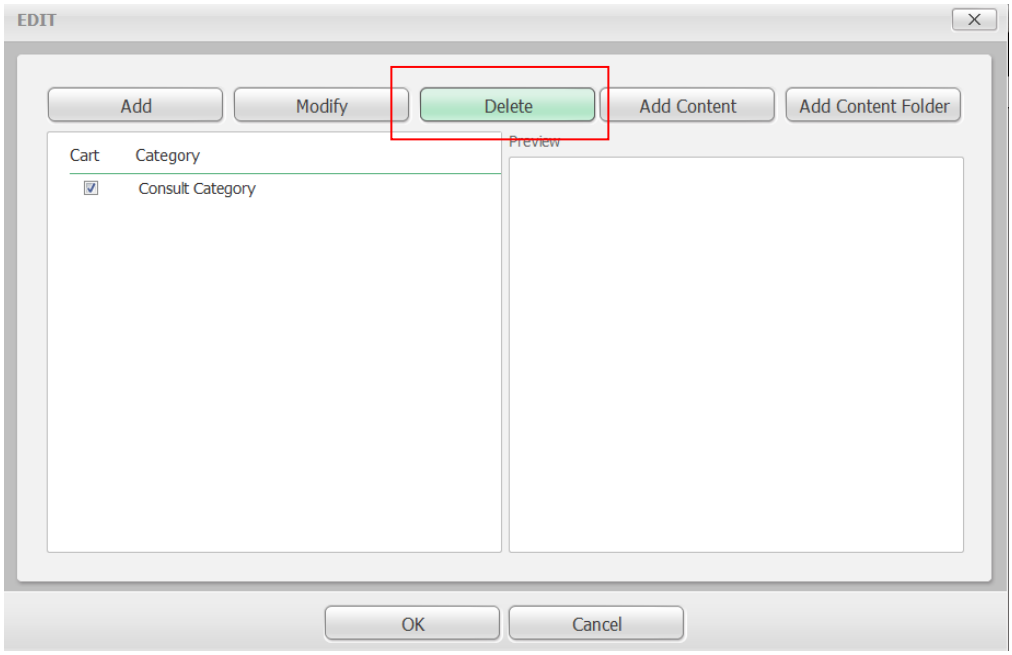
1. Click the [Edit] button in the category window.
2. The Edit window appears.
3. Select the category to be modified.
4. Click the [Modify] button.




5. Enter the name of the category that the user wants to modify.
6. Press the[Enter] button on the keyboard to complete the name change.

**Deleting a category**

1. Click the [Edit] button in the category window.
2. The Edit window appears.
3. Select the category to delete.
4. Click the [Delete] button.

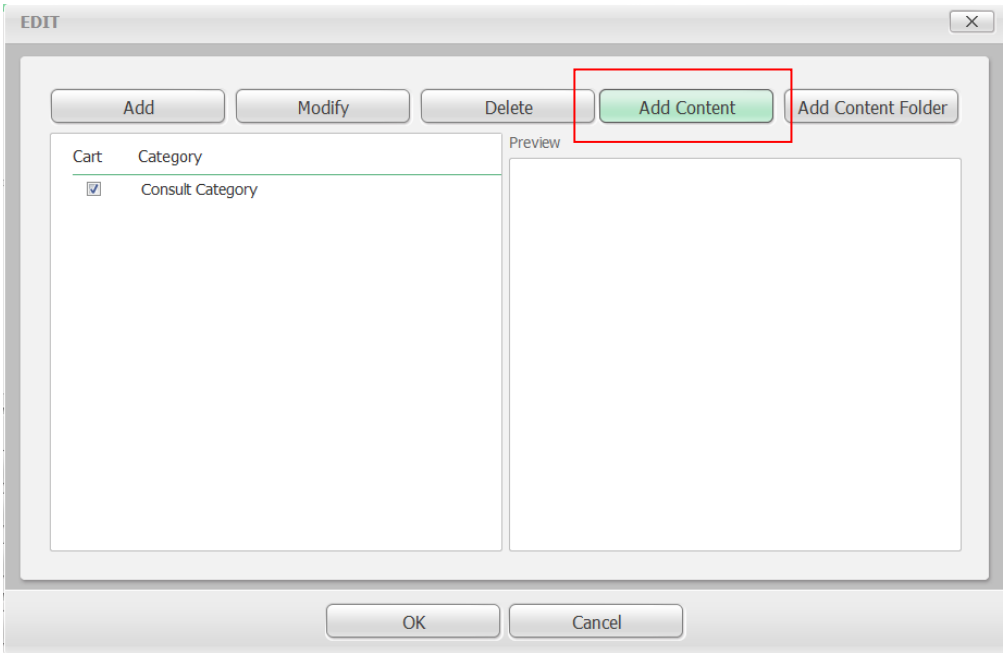



5. The following delete window appears. Click the [Yes] button.

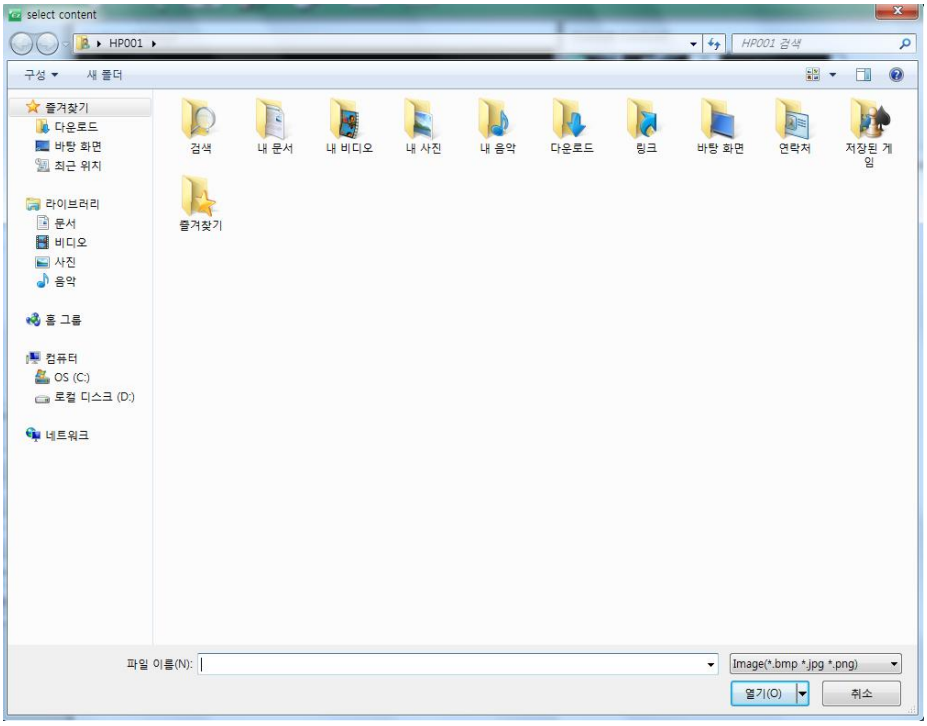
6. The category is deleted.

**Adding contents**

1. Click the [Edit] button in the category window.
2. The Edit window appears.
3. Select the category to add new contents.
4. Click the [Add Content] button.




5. The following Select Content window appears.

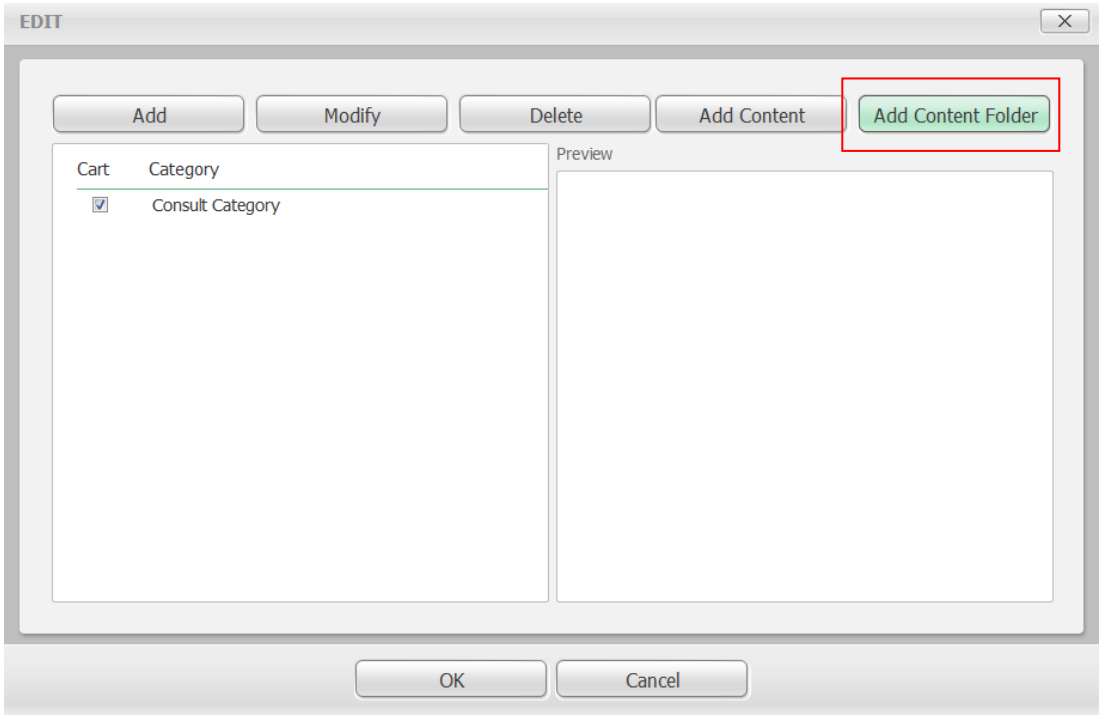



6. Click the content to add and then click [Open].
7. The new content appears in the Preview window.

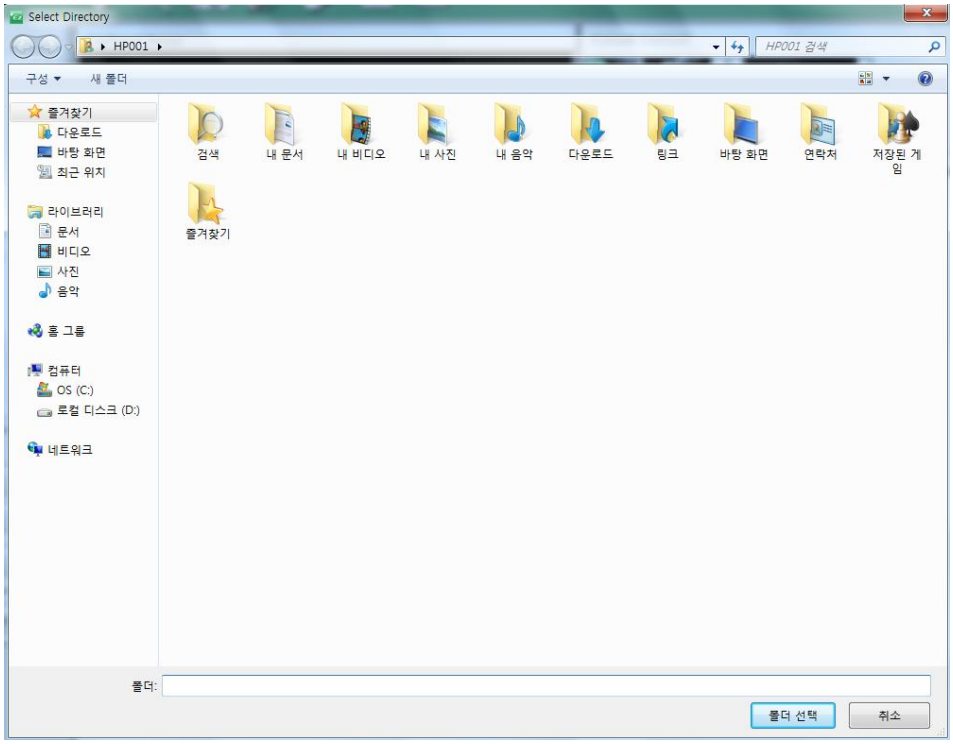
8. Enter the name of the new content in the Name window.
9.After clicking the selected content, drag and drop the content on the category as desired.
10.Adding a new content is complete.

**Adding content folder**

1. Click the [Edit] button in the category window.
2. The Edit window appears.
3. Select the category to add the content folder.
4.Click the [Add Content Folder] button.




5. TheSelect Directory window appears as follows.



6.Locate and click the folder to be added.
7. Click [Choose Folder] and click the[Ok] button.
8. The added folder appears.

**Tip**

Change the folder name.

Double click the folder in the Edit window to change the name.

Guide 4. Tools in the Tool Bar

## The Main Tools

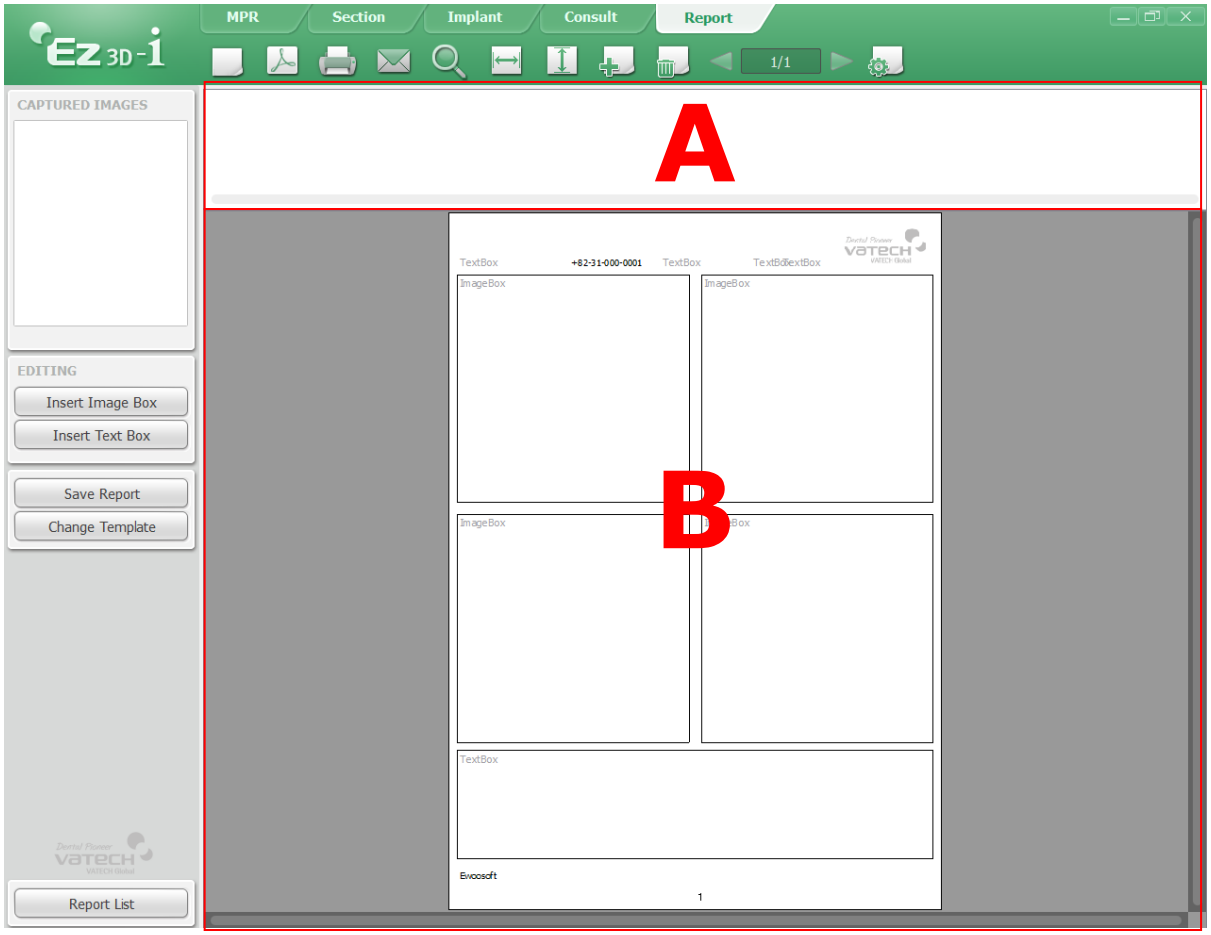
| Icons | Designation | Description of Features |
|---|---|---|
| | Panning | Move the image |
| | Zooming | Magnify the image |
| | View Frame Capture | Capture the View Frame area |
| | Pointer | Draw freely |
| | Eraser | Clear |
| | DB Save | Save in the database |
| | Send Mail | Send email |

## 4-6. Report Tab

The Report Tab is provided to record and keep the diagnosis and counseling records. It can be used as a chart to record images of the patient and treatment description .Ez3D-i can send the report to the patient directly via email as a PDF file.

### Guide 1. Configuring and modifying Report Tab Screen

**Workspace properties**




A is the screen that displays the captured images. Images captured by the user in the View Frame area on each tab are listed.

B is the screen of the report that the user creates. Images or text can be added to create the report.

**Menu Button properties**

**Note**

Refer to 4-2➔ Guide 1➔'Menu Button properties'.

**Control Panel properties**

**Note**

Refer to 4-2➔ Guide 1➔'Control Panel properties'.

**Changing Layout**

**Note**

Refer to 4-2➔ Guide 1➔'Changing Layout'.

### Guide 2.Creating a report

#### Inserting an image captured in the report

1. Drag and drop the image captured by the user from each tab in the image box of the report.
2. The image is inserted on the report screen.

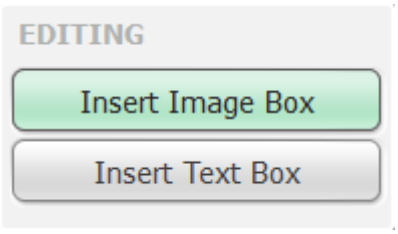
#### Entering the text in the report

1. Double click the report TEXT window to enter the text by the user.

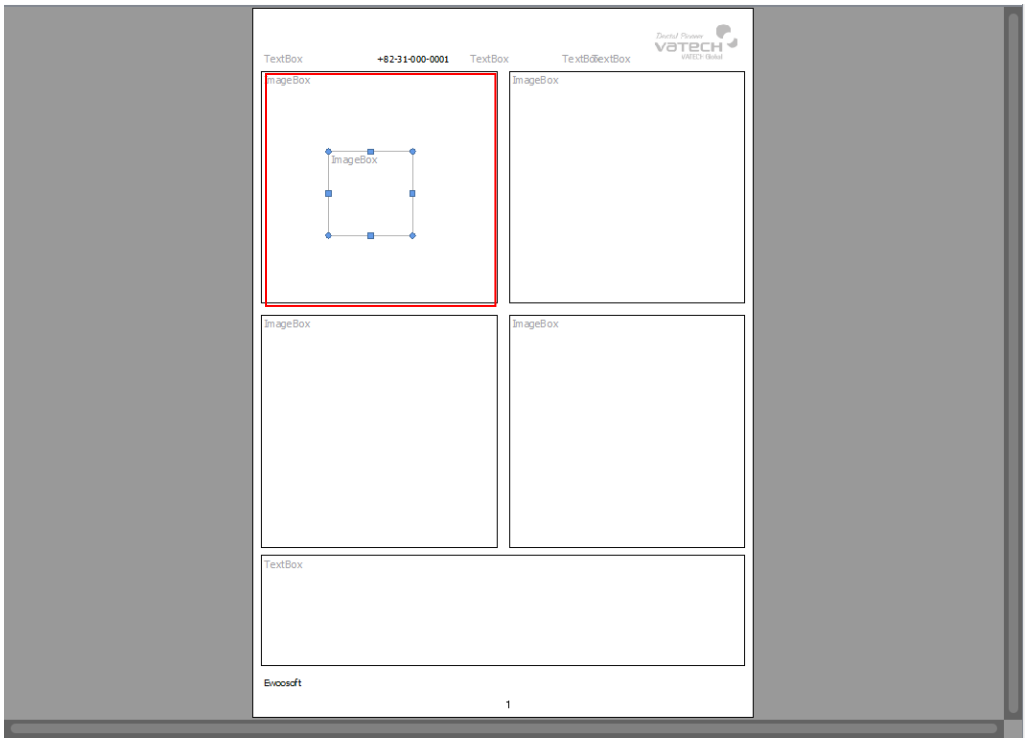
### Guide 3. Editing a report

#### Insertingan image box

1. Click the [Insert Image Box] button in the Editing window.

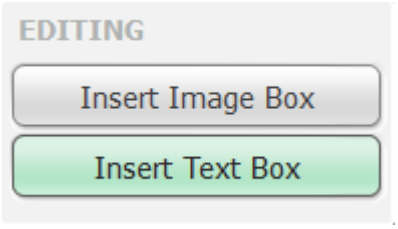



2. Click the location in the report to insert an image box.
3. A new image box is inserted into the report.

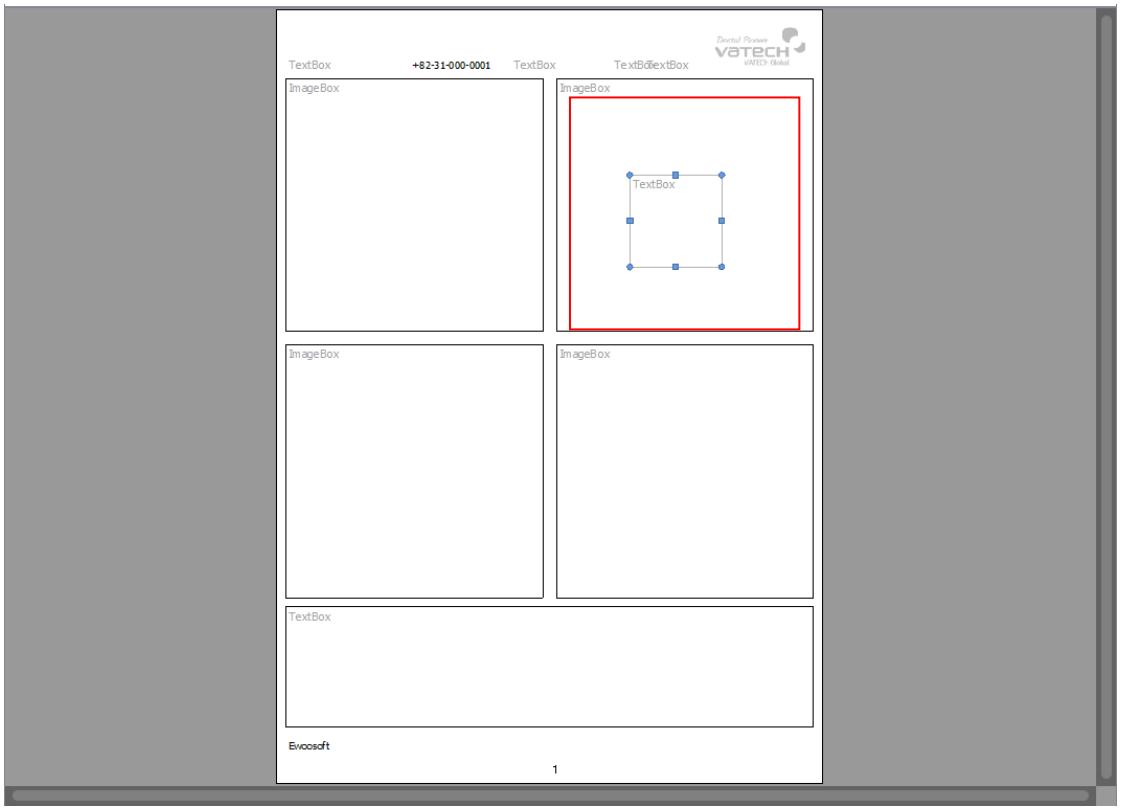


**Insertinga text box**

1. Click the [Insert Text Box] button in the Editing window.

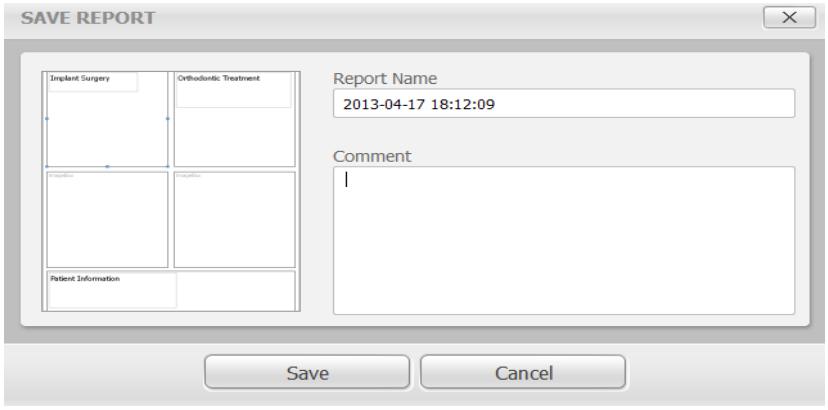



2. Click the location on the report to insert a text box.
3. A new text box is inserted into the report.



### Guide 4. Saving a report

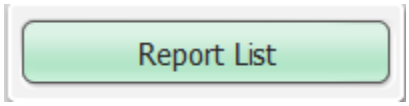
1. After finishing a report, click the [Save Report] button.
2. The Save Report window appears as follows.



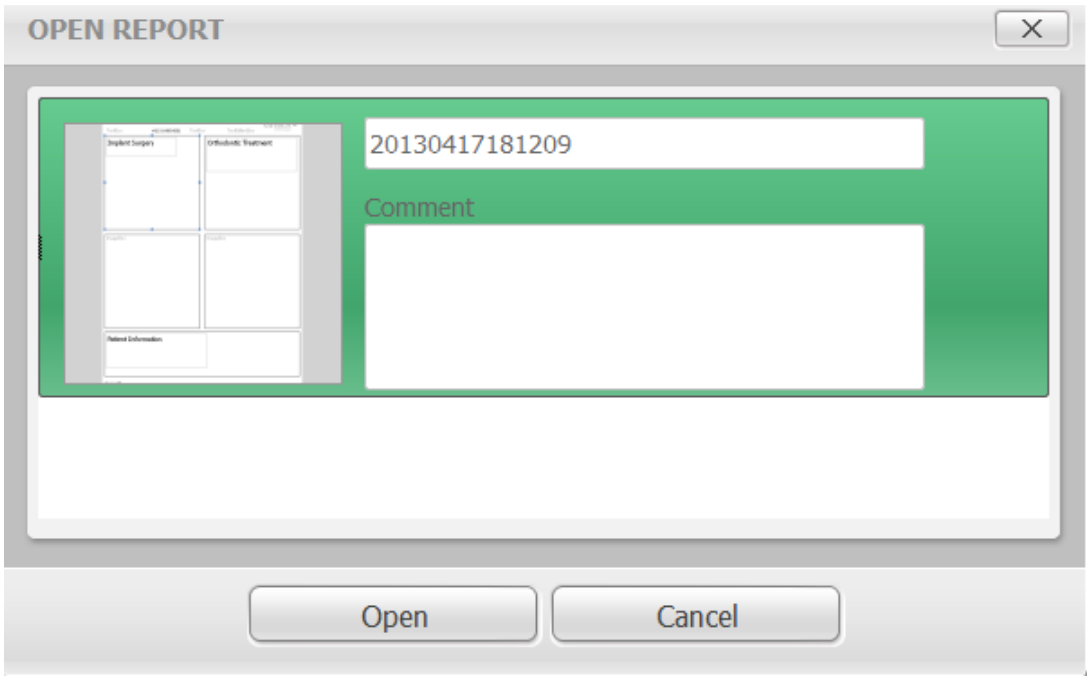

3. Enter a description of the report in [Comment].
4. Click the [Save] button to save the report.

**Guide 5. Opening the report list**

1.Click [Report List] in the bottom left corner of the screen.




2. The Open Report window appears as follows.




3. After selecting the report to import, click the [Open] button.
4. The selected report appears on the screen.

### Guide 6. Setting the report page

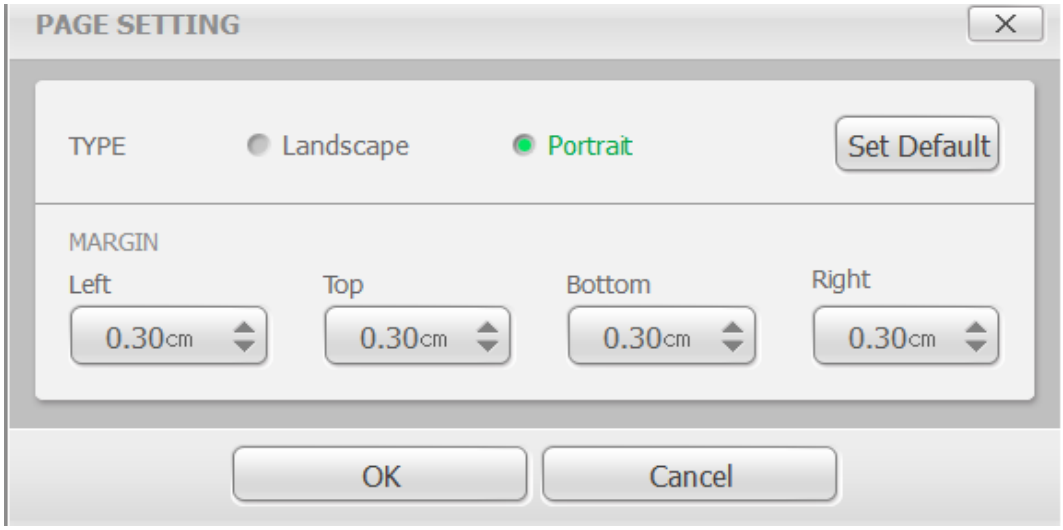
**Note**

Set the report page.

The user can manually set the page orientation and page margin.

1. Click the[Page Setting] icon.

2. The Page Setting window appears as follows.




3. After selecting the orientation of report page and margins, click the [Ok] button.

Guide 7. Tools in the Tool Bar

## Main Tools

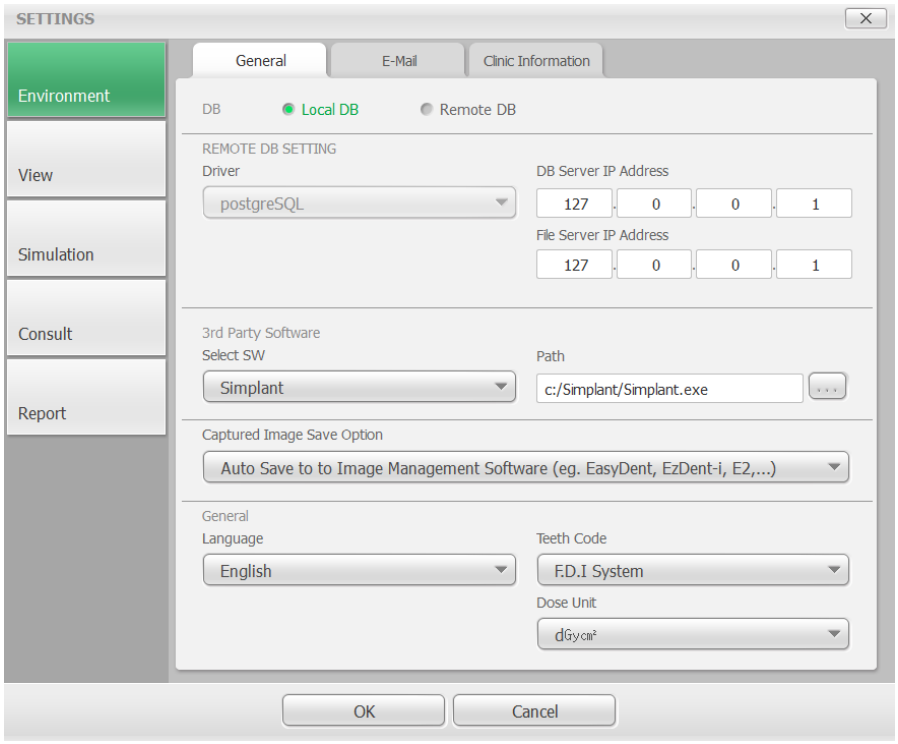
| Icons | Designation | Description of Features |
|---|---|---|
| | New Report | Create a new report |
| | Export PDF | Export as PDF |
| | Print | Print |
| | E-mail | Send email |
| | Zoom | Magnify |
| | Horizontal Fit | Fill up the screen from side to side |
| | Vertical Fit | Fill up the screen top and bottom |
| | Page Add | Add the page |
| | Page Delete | Delete the page |
| | Page Setting | Set up the page |

# 5. Setting up Ez3D-i

Ez3D-i setting provides the user general preferences and conditions necessary to use the software.
The MPR, Section, Implant, Consult, and Report tab can be set up according to the convenience of the user.

### Guide 1. Operating environment setting

## 1.1 General preferences




**DB**

**Note**

The user can set the location where the data is stored in the program.

Local DB is the PC database the user is currently using.
Remote DB is the database of another PC on the local network.

**Remote DB Setting**

**Note**

The user can set the remote DB driver,  IP address, and the DB server on the local network.

PostgresSQL driver is the name of the remote driver that Ez3D-iutilizes.
DB Server IP Address is the IP address of the PC that the user is currently using.
File Server IP Address is the IP address of another PC on the Local Network.

**3rd Party Software**

**Note**

The user can set the linkage with Simplant and Nobel Guide.

**Captured Image Save Option**

**Note**

The user can set the save option to store captured image manually or automatically.

**General**

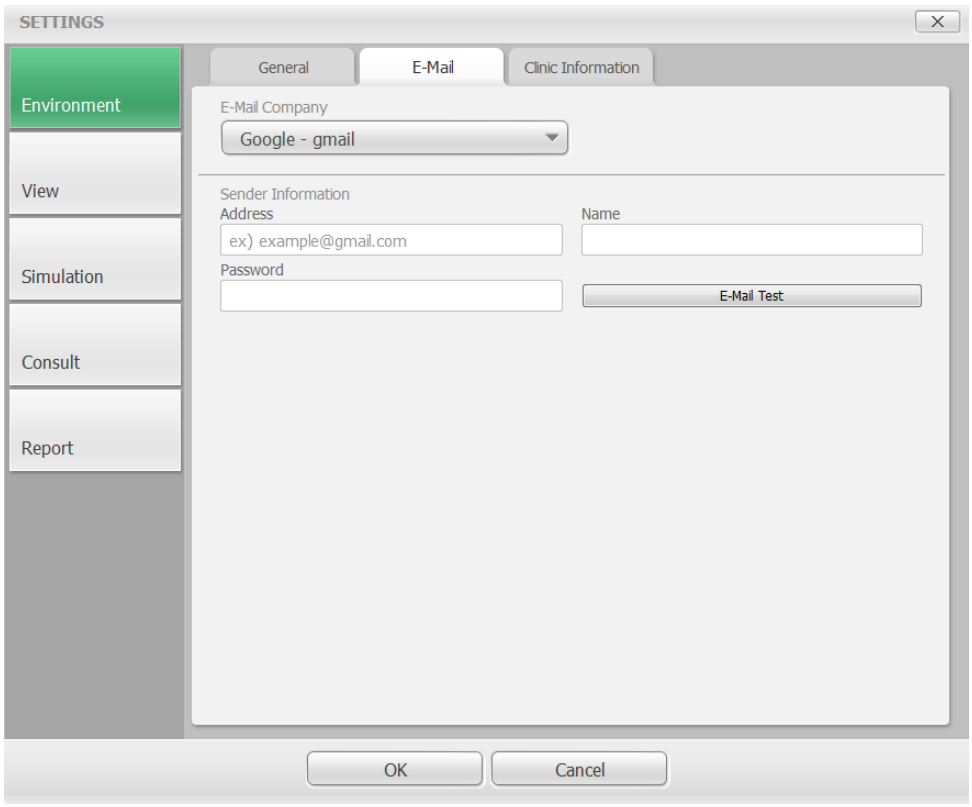
**Note**

The user can set the program’s language environment, tooth code, anddose unit.

Ez3D-i is provided in English, Korea, Japanese, Chinese, French, Russian, Portuguese, German, Spanish, Italian, and Arabic.

The Tooth Code isprovided in Universal System and F.D.I System.

### 1.2 Email preferences




**E-mail Company**

**Note**

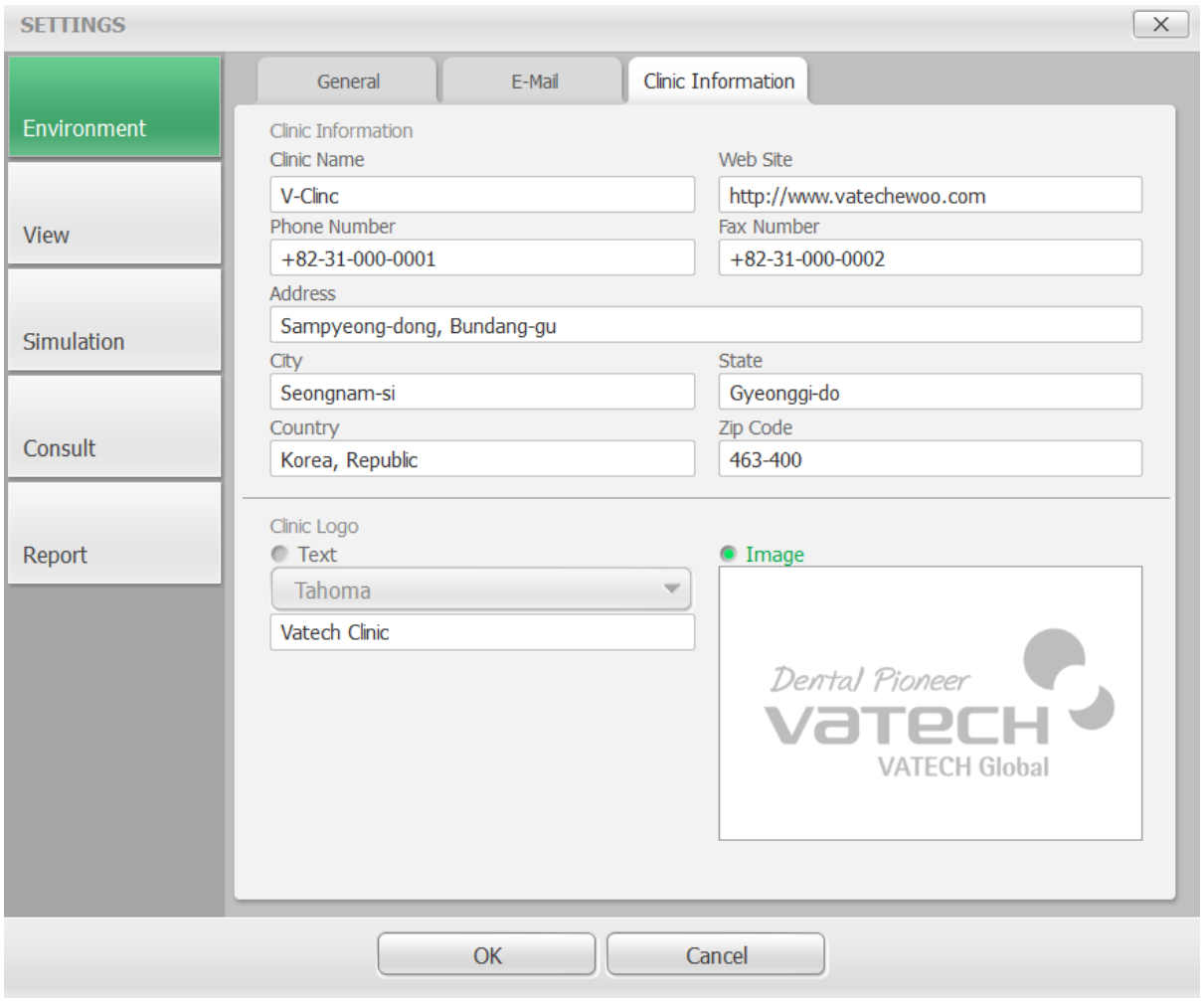
The user can set up an email account to be used.

**Sender Information**

**Note**

The user enters the email information of the sender such as the e-mail address, name, and password. The user can send a test e-mail.

### 1.3 Clinic Information




**Clinic Information**

**Note**

The user can input the clinic information such as the name of the clinic, website address, phone number, fax number, address, clinic logo, and image. The report reflects the information entered.

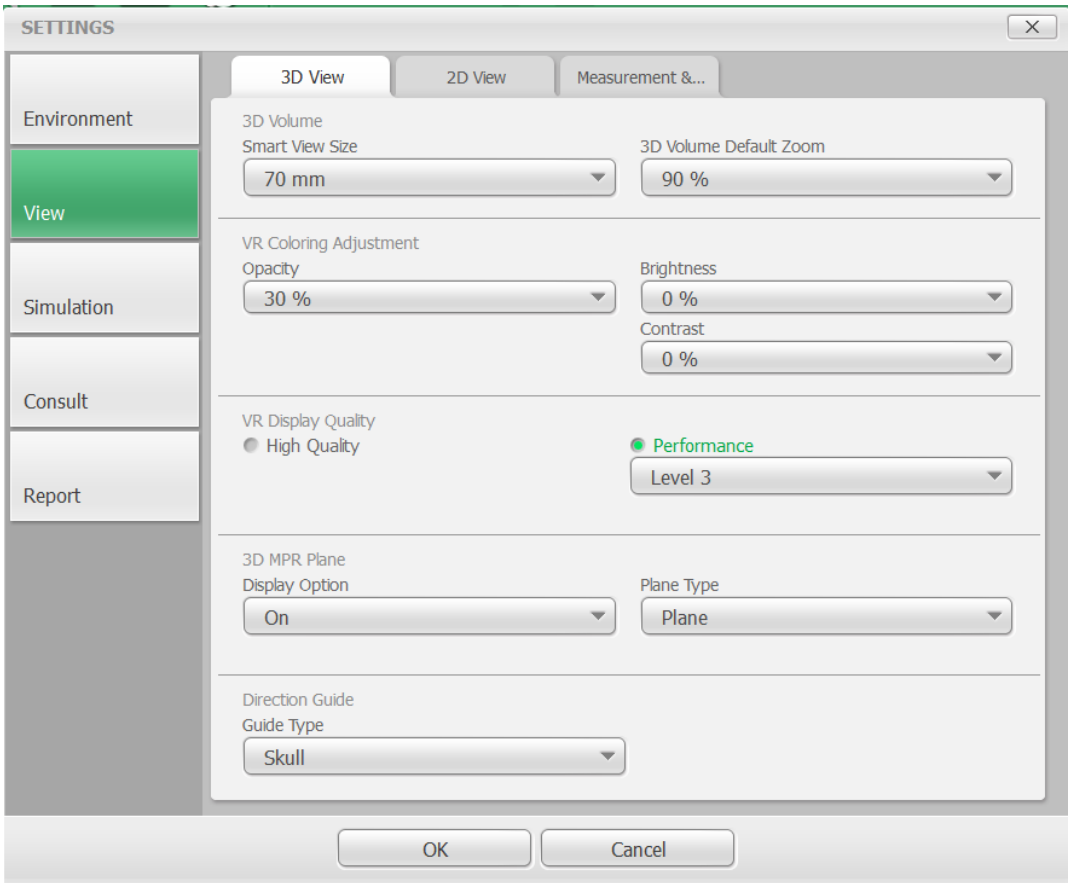
**Clinic Logo**

**Note**

Once the clinic logo (PNG file) is registered, it appears at the bottom left of the Ez3D-i screen by default.

## Guide 2. View environment setting

### 2.1 3D View preferences




**3D Volume**

**Note**

The user can set the 3D image preferences.

The Smart View Size is based on the actual size by double clicking the 3D image.
The 3D Volume Default Zoom is the default magnification when expanding the 3D image.

**VR Coloring Adjustment**

**Note**

The user can set the VR Coloring. The default value of transparency, brightness and contrast also can be set.

**VR Display Quality**

**Note**

High Quality setting determines the high quality 3D image resolution.
Performance setting determines the speed of 3D image rotation.

Level 1doubles the existing speed. Level 2 increasesthe speed 3-fold and Level 3 increasesthe speed by a factor of 4.

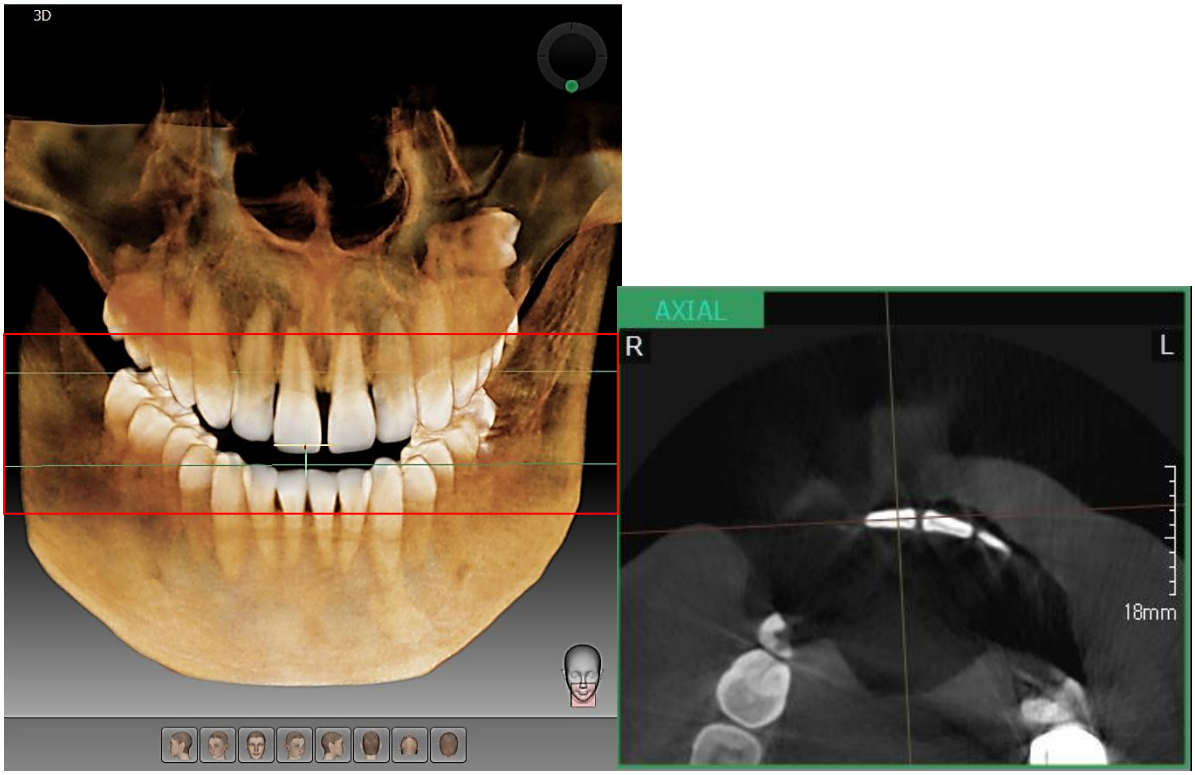
As the rotation speed increases, the image quality will be reduced while rotating. However, a still image offers the highest quality.

**3D MPR Plane**

**Note**

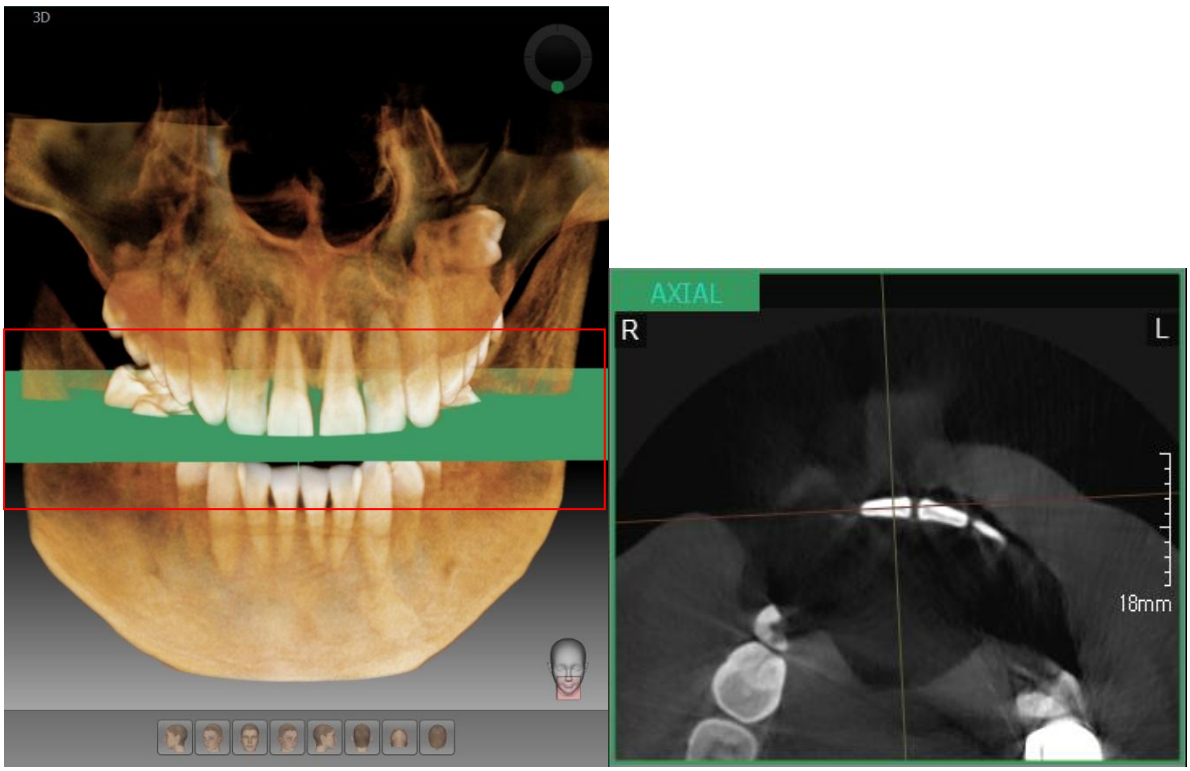
In the MPR tab, the user can set the plane mark, type, and format for Axial, Sagittal, and Coronal axis.
The color of type and form will be displayed the same color as Axial, Sagittal, Coronal View screen.

The Plane Type is set via [Outline]




**>> Axial axisas the Green line**

The Plane Type is set via [Plane]

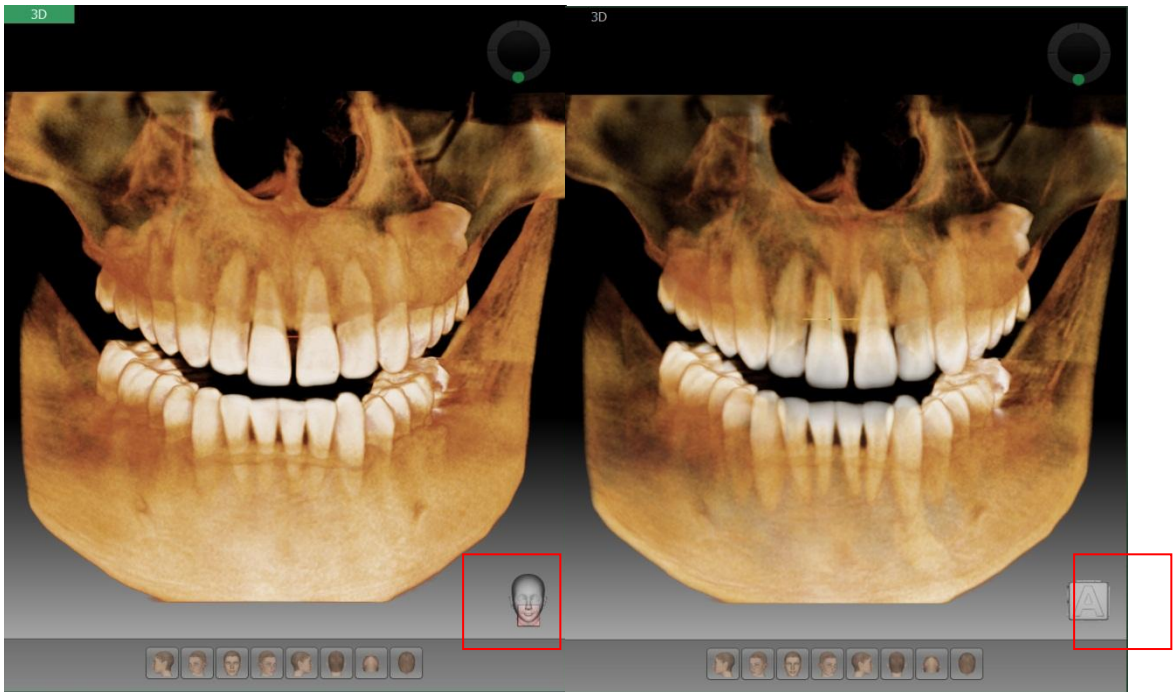



**>>Axial axis as Green Plane**

**Direction Guide**

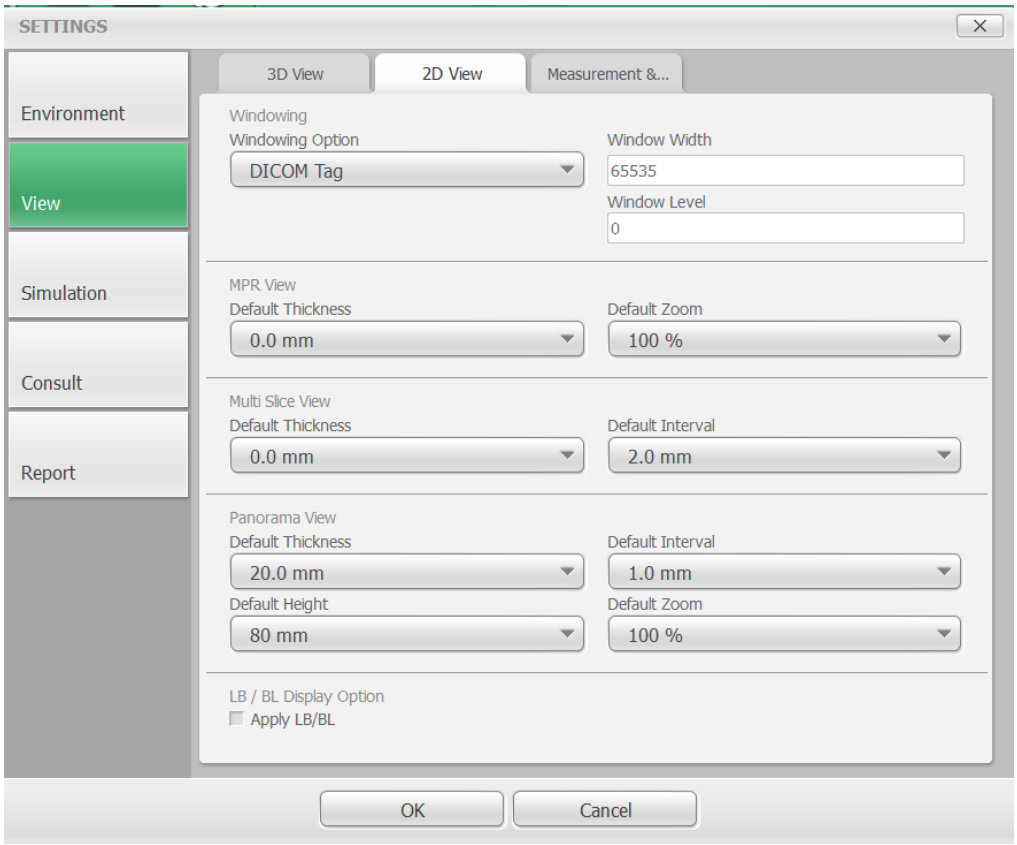
**Note**

In the MPR tab, the user can set the guide type to show the direction of the 3D image.




**>> Skull Guide Type** **>>Cube Guide Type**

### 2.2 2D View preferences




**Windowing**

**Note**

DICOM Tag applies the Window Width and Window Level values that are stored in the DICOM file.
The user can specify and set up the User Define directly.

**MPR View**

**Note**

The user can set the default thickness and the basic scale of the zoom in and out.

**Multi Slice View**

**Note**

The user can set the default thickness and spacing.

**Panorama View**

**Note**

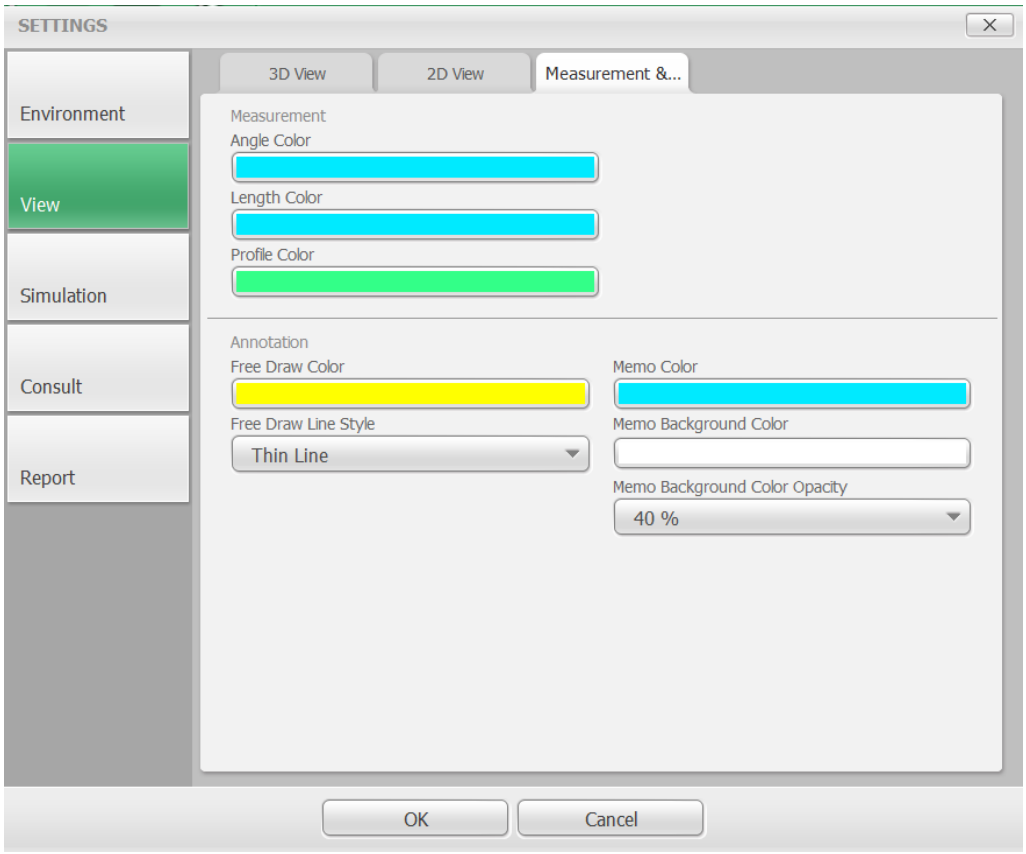
The user can set the default thickness, spacing, height, and the basic scale of zoom in and out.

**LB/ BL Display Option**

**Note**

When the Apply LB/ BL element is selected, the display location of LB on the Section View is changed depending on the basis of a slice which the user specified.

### 2.3 Measurement, notes preferences




**Measurement**

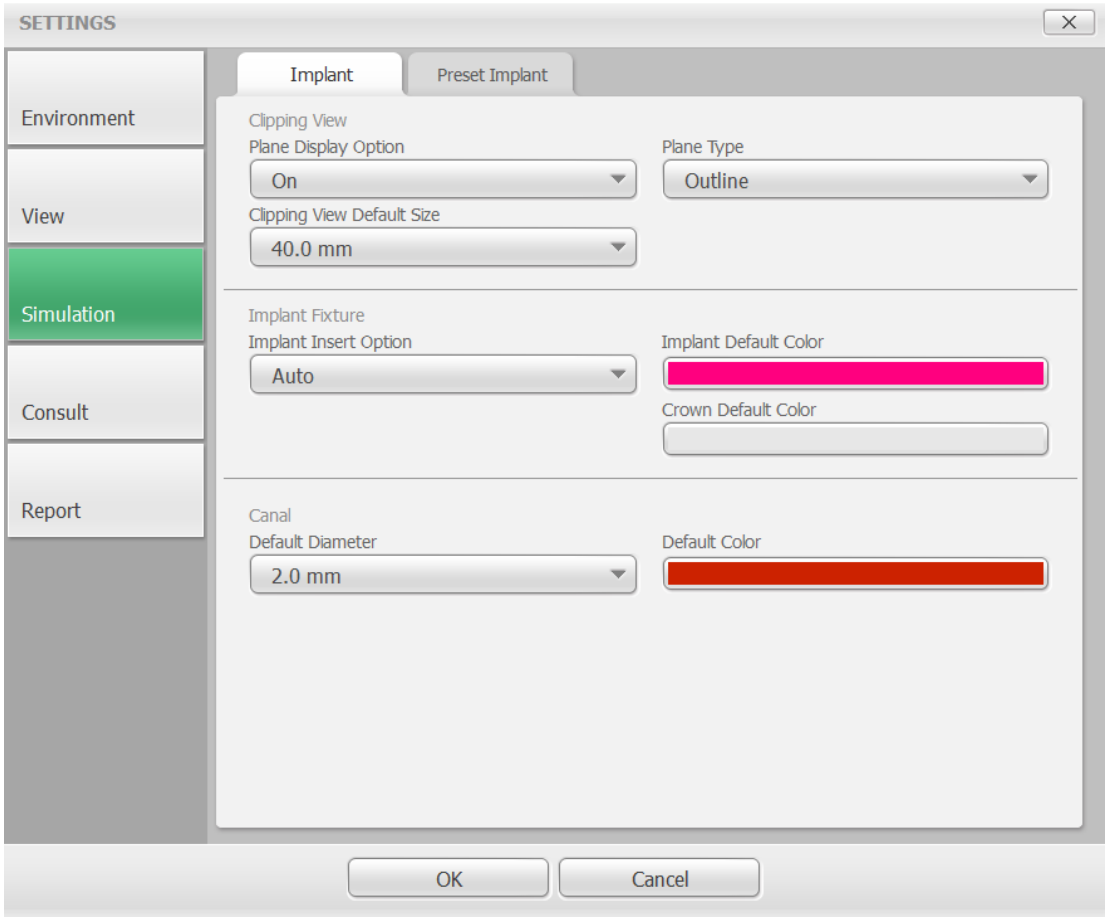
| **Note** |
| --- |
| The user can set the angle, length, and the default color profile. |

**Annotation**

| **Note** |
| --- |
| The user can set the line color and style of Free Draw.<br>The user can set the memo color, background color, and transparency of the background color. |

## Guide 3. Simulationpreferences setting

### 3.1 Implant preferences




**Clipping View**

**Note**

The user can set the existence of Plane mark, Plane type, and the default size.

**Implant Fixture**

**Note**

The user can set the auto / manual implant placement, primary color of implant, basic color of crown.

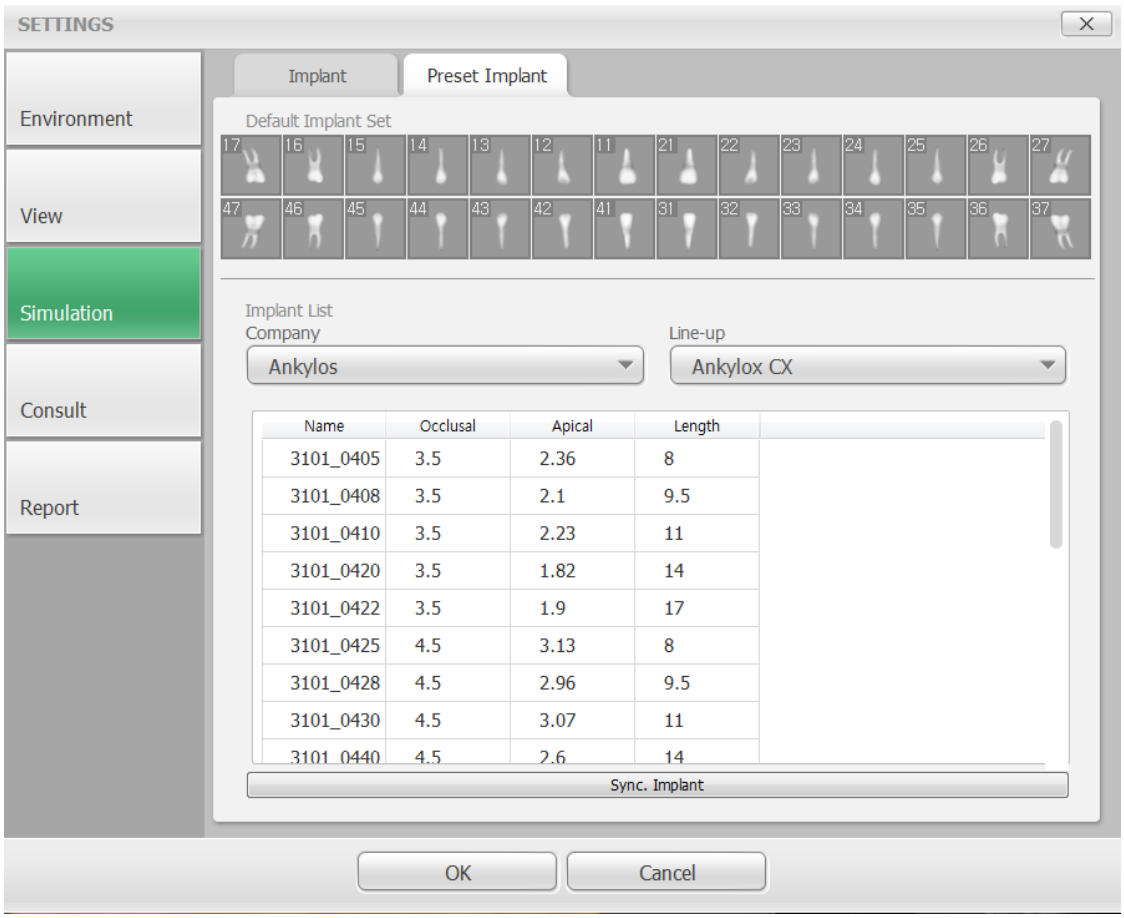
Select [Auto] from the Implant Insert Option to place the implant automatically in the MPR axis.
Select [Manual] so that the user can specify the location of the implant with the mouse.

**Canal**

**Note**

The user can set the default diameter and base color of the Canal.

### 3.2 Implant default settings




**Default Implant Set**

**Note**

For the implant simulation, the user can set the default implant value according to the number of teeth.

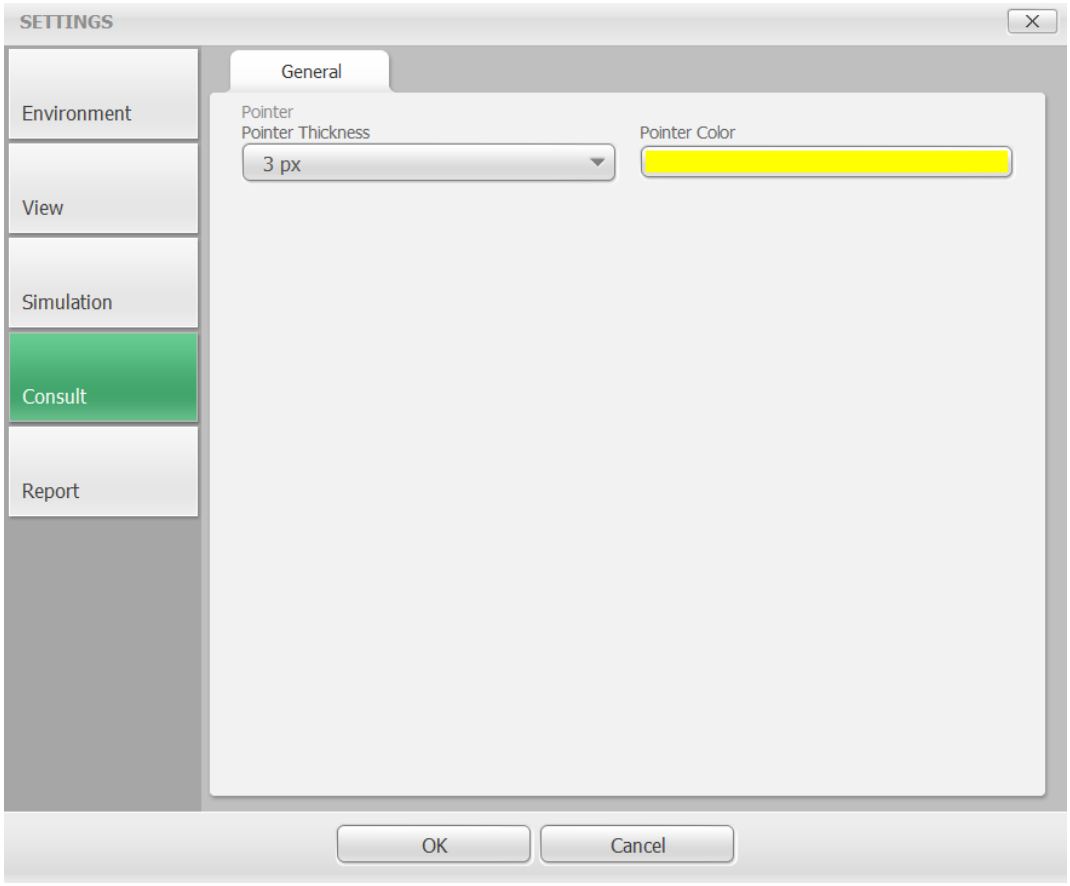
**Implant List**

**Note**

For the implant simulation,the user can set the implant company, product family, and model name regarding the default implant value according to each tooth number.

## Guide 4. Consult setting

### 4.1 Consult Setting of the general preferences

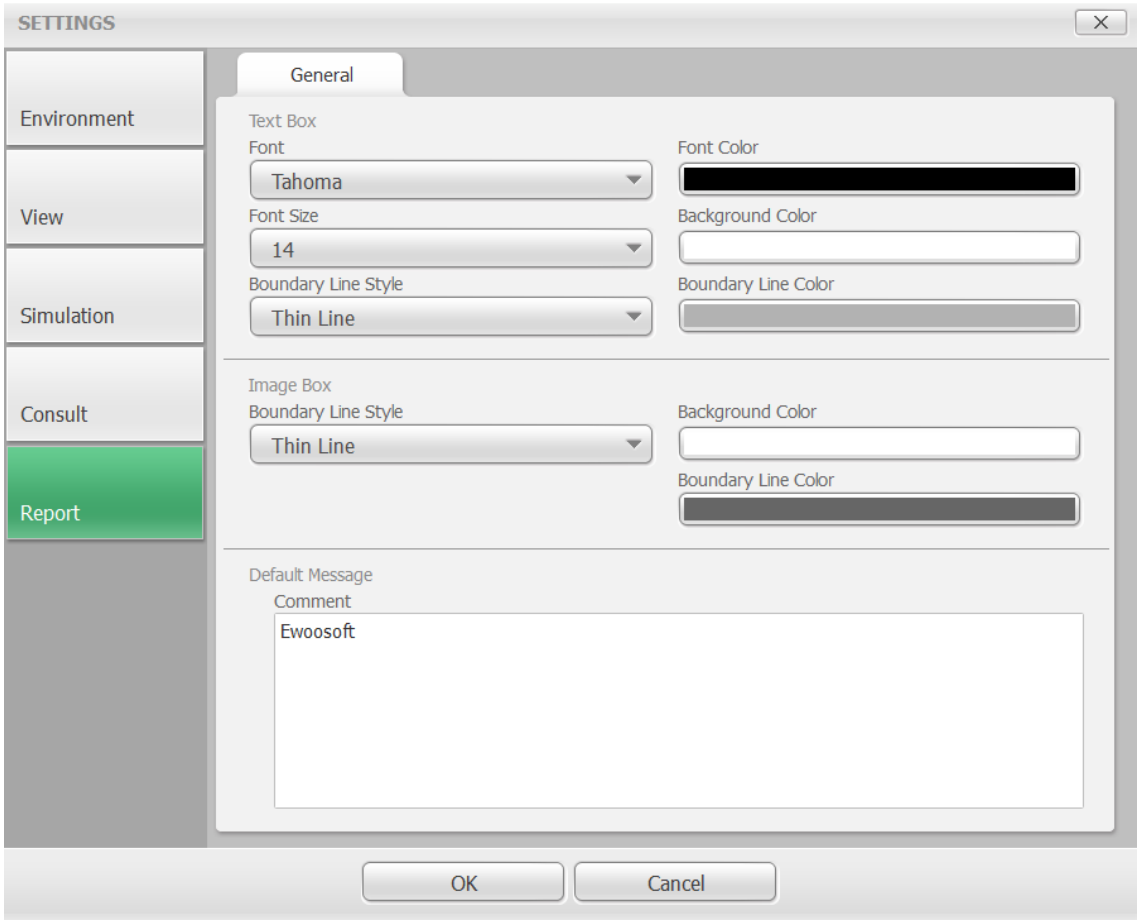



**Pointer**

| **Note** |
| --- |
| The user can set the thickness and color of the pointer. |

## Guide 5. Report setting

### 5.1 Report setting of General preferences




**Text Box**

| **Note** |
| --- |
| The user can set the font type, font size, font color, background color, border style, border color, and character array of the text box. |

**Image Box**

| **Note** |
| --- |
| The user can set the border style, background color, and border color of the image box. |

**Default Message**

**Note**

The user can create and set the default message to be inserted in the report. The message is embedded to appear in the footer of the template.

# Appendix1.

While using Ez3D-i, Error Code can occur due to wrong connection with the server or the network status. Please find the Error Code in the table below.

If the Error Code occured does not exist in the table below or the Error Code occurs consistently, please cotact the customer service center.

| No. | Error Code | Measures |
|---|---|---|
| 1 | E3_ERR_CODE2 | Please check the status of network and connection with the database server. After making sure the network connection works normally, please reboot the PC. |
| 2 | E3_ERR_CODE3 | Please check if VTFileManager is working normally and the database connection setting is correct. |
| 3 | E3_ERR_CODE4 | Failure to create a captured image occured. Please restart the PC and try it again. |
| 4 | E3_ERR_CODE6 | Please check if VTFileManager is working normally and the database connection setting is correct. |
| 5 | E3_ERR_CODE14 | Failure to create a captured image occured. Please restart the PC and try it again. |
| 6 | E3_ERR_CODE15 | Please restart the Ez3D-i. |
| 7 | E3_ERR_CODE16 | Failure to create a captured image occured. Please restart the PC and try it again. |
| 8 | E3_ERR_CODE17 | Please test again by sending a test E-mail. Click the Main Button and then, select Setting, Environment, Linkage/Email Tab. After checking the information in the text box of EMAIL SENDER is set, click the TEST button. See if the test worked normally. |
| 9 | E3_ERR_CODE18 | Please check if the Email address and other information in Setting are correct. |
| 10 | E3_ERR_CODE19 | |
| 11 | E3_ERR_CODE20 | Failure to connect to Implant DB occurred or database setting is not correct. Please check the network status or connection with the database server. |
| 12 | E3_ERR_CODE21 | |
| 13 | E3_ERR_CODE22 | |
| 14 | E3_ERR_CODE23 | |
| 15 | E3_ERR_CODE24 | |
| 16 | E3_ERR_CODE25 | |
| 17 | E3_ERR_CODE26 | |
| 18 | E3_ERR_CODE27 | Please check the network status and the connection with the File Server. |
| 19 | E3_ERR_CODE28 | |
| 20 | E3_ERR_CODE33 | Implant data does not exist. Please check if implant data exists on the server and try it again. |
| 21 | E3_ERR_CODE34 | Please check if STL file for Crown exists. |
| 22 | E3_ERR_CODE35 | Please check the network status and the connection with the File Server |
| 23 | E3_ERR_CODE36 | |
| 24 | E3_ERR_CODE37 | |
| 25 | E3_ERR_CODE47 | Please check the network status. Please test again by sending a test E-mail. Click the Main Button and then, select Setting, Environment, Linkage/Email Tab. After checking the information in the text box of EMAIL SENDER is set, click the TEST button. See if the test worked normally. |
| 26 | E3_ERR_CODE50 | Please check the network status and the connection with the |

| | | |
|---|---|---|
| 27 | E3_ERR_CODE51 | database server. |
| 28 | E3_ERR_CODE52 | |
| 29 | E3_ERR_CODE53 | |
| 30 | E3_ERR_CODE54 | |
| 31 | E3_ERR_CODE55 | |
| 32 | E3_ERR_CODE56 | |
| 33 | E3_ERR_CODE57 | |
| 34 | E3_ERR_CODE58 | |